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PERSONAL.

Lieut. Eben T. Tannatt, Second Regiment, U. S. Volunteer Engineers, has resigned.

Mr. E. Sherman Gould, M. Am. Soc. C. E., of Yonkers, N. Y., has returned from Cuba.

Mr. Abram Wing, Superintendent of the City Water Supply Co., Ottumwa, Ia., has resigned.

Mr. R. C. Gemmell, M. Am. Soc. C. E., of Salt Lake City, has been appointed State Engineer of Utah.

Mr. W. Oswald, General Manager of the Rambach Steel Co., Rambach, Germany, is visiting Birmingham, Ala.

Mr. Samuel A. Benner, of the Carnegie Steel Co., Ltd., Pittsburg, Pa., will represent that company in Mexico, with headquarters in the City of Mexico.

Brig.-Gen. Roy Stone, Chief of the Road Information Bureau of the Agricultural Department, has returned to Washington, D. C., from Ponce, Puerto Rico.

Mr. George Wash has been appointed Superintendent of the Braddock (Pa.) Wire Works of the American Steel & Wire Co., to succeed Mr. John McIlvried, resigned.

Mr. Myron Chace Clark, of the business department of the Engineering News Publishing Co., was married Oct. 5, to Miss Nell Mansfield Fogarty, of Lakewood, N. J.

Capt. Charles B. Kahler, First Regiment, U. S. Volunteer Engineers, has been honorably discharged on account of physical disability. His home is in Baltimore, Md.

Mr. F. R. Griffin has been appointed Assistant Superintendent of the Nebraska Division of the Union Pacific R. R., with headquarters at Omaha, Neb., to succeed Mr. Harry E. Flaving, transferred to Denver, Colo.

Mr. Clark W. Harrison, formerly the Vice-President and Manager of the South Pittsburg Pipe Works, South Pittsbrug, Tenn., has been appointed General Western Manager for the American Pipe & Foundry Co., Chattanooga, Tenn., and will have his headquarters at 1625 Marquette Bldg., Chicago, Ill.

Mr. Walter J. Graves, civil engineer, has been appointed Recorder on the United States Lake Survey, with headquarters in the U. S. Engineer's Office, Port Huron, Mich. Mr. Graves is a graduate of Cornell University, Ithaca, N. Y., in the class of 1898, and was formerly with the Lake Shore & Michigan Southern Ry., at Toledo, O.

Mr. Frank E. Ward, General Superintendent of the Montana Central Ry., with headquarters at Great Falls, Mont., has been appointed General Superintendent of the Great Northern Ry., with headquarters at St. Paul, Minn., to succeed Mr. Russell Harding, whose resignation to become the Vice-President of the Cotton Belt System, with headquarters in St. Louis, Mo., was noted in our issue of Oct. 27.

Mr. H. E. Wittenberger, Trainmaster of the Grand Trunk Ry., at Stratford, Ont., has been transferred to London, Ont., in the same capacity, to succeed Mr. C. S. Cunningham, who has been transferred to Montreal, Que., succeeding Mr. R. P. Dalton. Mr. H. E. Costello, formerly Trainmaster of the Columbus, Hocking Valley & Toledo R. R., at Toledo, O., has been appointed to succeed Mr. Wittenberger.

Mr. Arthur P. Davis, Assoc. M. Am. Soc. C. E., hydrographer, and Dr. C. Willard Hayes, geologist, have returned to Washington, D. C., after 11 months' absence in Nicaragua. They were detailed from the U. S. Geological Survey to service under the Nicaragua Canal Commission. Mr. Davis has been measuring the larger rivers and the outflow of Lake Nicaragua; and Dr. Hayes has had in charge the borings for bed rock at the sites of large dams.

OBITUARY.

Mr. Edward C. Nichols, Water Commissioner, of Reading, Mass., died Oct. 29, aged 66.

Mr. Thomas A. Roberts, architect, of New York city, died at Asbury Park, N. J., Nov. 6, aged 66.

Mr. Charles F. Parker, of the firm of Chas. F. Parker & Co., contractors, of New York city, died Oct. 17.

Mr. Dore Lyon, contractor and builder, of New York city, died at his home in Westchester, N. Y., Nov. 4, aged 57.

Mr. William McGregor, of the firm of William McGregor & Co., boilermakers, of Chicago, died in that city Oct. 31, aged 72.

Mr. Edward M. Garner, Sr., owner of the water-works at Luzerne and Hadley, N. Y., died in the latter place Nov. 1, aged 65.

Mr. Charles H. Summers, Chief Electrician of the Western Division of the Western Union Telegraph Co. at Chicago, died Nov. 2, in San Francisco, Cal.

Mr. A. L. Poudrier, civil engineer and surveyor, committed suicide recently while camping on one of the Queen Charlotte Islands, British Columbia.

Lieut. Thomas Randolph Sullivan, First Regiment United States Volunteer Engineers, died in New York city Nov. 3, aged 26. He returned several weeks ago from Puerto Rico, where he contracted malarial fever.

Mr. Frank C. Doran, M. Am. Soc. C. E., whose death was noted in our issue of Oct. 27, had been for some years Chief Engineer and General Roadmaster of the Chicago & Western Indiana R. R. and the Belt Ry. of Chicago, and held this position at the time of his death.

Mr. Charles H. Patterson, civil engineer, died of heart disease at Mapiui, Mex., Aug. 26. He was a native of Doylestown, Pa., and went to Brazil, about 1874, with the Collins party, to make surveys for the proposed Madeira River Ry. In January, 1881, he was engaged to make preliminary surveys for the National Construction Co., of New York, in the provinces of Tamaulipas and Nuevo Leon, Mexico, and on the line of one of the surveys a railway was afterward constructed, from Laredo to Monterey. He returned to the United States for a time, but again went to Mexico and for a long time was stationed near Lampazos in charge of railway construction.

Col. James C. Biddle, civil engineer and manufacturer, died at his home, in Philadelphia, Pa., Nov. 2. He was born in that city, Oct. 3, 1835, and graduated from the University of Pennsylvania in 1853, as a civil engineer. He followed his profession for many years, assisting in the construction of a number of Pennsylvania railways, and at the outbreak of the Civil War enlisted as a private in the Union Army. On Aug. 1, 1861, he was breveted Lieutenant-Colonel and four years later was made Colonel for meritorious services before Richmond. After the war he engaged in the manufacture of chemicals and woolens until a few years ago.

Dr. David Ames Wells, inventor, scientist, educator and political economist, died at his home, Norwich, Conn., Nov. 5. He was born in Springfield, Mass., June 17, 1828, and graduated from Williams College, Williamstown, Mass., in 1847. In 1848, while on the staff of the Springfield "Republican," he invented a machine for folding newspapers and books, and the same year entered the Lawrence Scientific School of Harvard University, Cambridge, Mass. In 1851 he became an Assistant Professor at Harvard and Lecturer on Physics and Chemistry in Groton Academy, Groton, Mass. At Cambridge, in 1849, he began with Mr. George Bliss the publication of the "Annual of Scientific Discovery," which continued until 1866. In 1856 he invented valuable improvements in the method of manufacturing textile fabrics. He was a member of the firm of G. P. Putnam & Co., publishers, of New York city, in 1857 and 1858, and compiled several scientific text-books. He came into National prominence in 1863 as a writer on economic and financial subjects, and was consulted by President Lincoln with regard to the financial policy to be adopted by the government upon the termination of the Civil War. He was appointed Special Commissioner of the Revenue, in January, 1866, an office created for him, and held this post until 1870, when he was appointed chairman of a commission to examine the tax laws of the State of New York. In 1876 he was appointed Receiver of the Alabama & Chattanooga R. R., and in 1878 he made an exhaustive report on the subject of tolls on the New York State Canals. He was in the latter year elected a member of the Board of Arbitration of the Associated Railways of the United States. Mr. Wells was elected a Foreign Associate of the French Academy of Political Science, in 1874, and was President of the American Social Science Association from 1875 to 1879.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS.
Nov. 10-11. Annual meeting. Secy., Francis T. Bowles, 12 West 31st St., New York.

ST. LOUIS RAILWAY CLUB.
Nov. 11. "The Performance of a Four-Cylinder Compound Locomotive." Discussion. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

CENTRAL RAILWAY CLUB.
Nov. 11. Secy., H. D. Vought, 114 Fifth Ave., New York city.

MONTANA SOCIETY OF ENGINEERS.
Nov. 12. Secy., A. S. Hovey, National Bank Bldg., Helena, Mont.

TECHNICAL SOCIETY OF NEW YORK.
Nov. 12. "The Breaking Up and Magnetic Cleansing of Iron Ore," C. G. Buchanan. Secy., F. H. Gottlieb, 192 Third Ave., New York city.

ENGINEERS' CLUB OF KANSAS CITY.
Nov. 14. "Rectification of the Red and Atchafalaya Rivers," A. F. Woolley, Jr. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

THE LOUISIANA ENGINEERING SOCIETY.
Nov. 14. Secy., J. F. Coleman, 712 Union St., New Orleans, La.

NORTHWEST RAILWAY CLUB.
Nov. 15. Secy., T. A. Foque, Soo Line, Minneapolis, Minn.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
Nov. 15. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

WESTERN RAILWAY CLUB.
Nov. 15. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

ENGINEERS' AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.
Nov. 16. Secy., Frank H. Olmsted, Los Angeles, Cal.

BOSTON SOCIETY OF CIVIL ENGINEERS.
Nov. 16. Secy., S. E. Tinkham, City Hall, Boston, Mass.

ENGINEERS' CLUB OF ST. LOUIS.
Nov. 16. Secy., Richard McCulloch, 2401 N. Spring Ave., St. Louis, Mo.

WESTERN FOUNDRYMEN'S ASSOCIATION.
Nov. 16. Secy., B. M. Gardner, 1522 Monadnock Block, Chicago, Ill.

WESTERN SOCIETY OF ENGINEERS.
Nov. 16. "The Manchester Ship Canal," Elmer L. Corthell. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
Nov. 16. "Launhardt Formula and Railroad Bridge Specifications," H. B. Seaman. Secy., C. W. Hunt, 220 West 57th St., New York city.

NEW YORK RAILROAD CLUB.
Nov. 17. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
Nov. 17. Secy., F. A. Charpiot, P. O. Box 13, Savannah, Ga.

ENGINEERS' CLUB OF CINCINNATI.
Nov. 17. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.

CHICAGO ELECTRICAL ASSOCIATION.
Nov. 18. "The Development of the Motor-Cycle," F. B. Rae. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

ENGINEERS' CLUB OF COLUMBUS.
Nov. 19. Secy., H. M. Gates, 12½ North High St., Columbus, O.

TECHNICAL CLUB OF OMAHA.
Nov. 21. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' CLUB OF MINNEAPOLIS.
Nov. 21. Secy., H. E. Smith, 1620 S. E. 4th St., Minneapolis, Minn.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.
Nov. 21. Secy., Marshall Morris, 16 Norton Bldg., Louisville, Ky.

FRANKLIN INSTITUTE.
Nov. 22. Secy., Wm. H. Wahl, 15 South Seventh St., Philadelphia, Pa.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Nov. 22. Secy., Wm. H. Searles, Case Library Bldg., Cleveland, O.

ENGINEERING ASSOCIATION OF THE SOUTH.
Nov. 24. Secy., C. B. Wilson, 1000 Broad St., Nashville, Tenn.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
Nov. 24. Secy., C. A. McNab, 112 Mansfield St, Montreal, Canada.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.
Nov. 30. Secy., Ralph W. Pope, 26 Cortlandt St., New York city.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
Dec. 2. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES.
Dec. 2. Secy., Henry I. Weed, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.

ENGINEERS' SOCIETY OF WESTERN NEW YORK.
Dec. 5. Secy., H. J. March, Library Bldg, Buffalo, N. Y.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
Dec 5. Secy., C. L. Annan, City Engineer's Office, St. Paul, Minn.

DENVER SOCIETY OF CIVIL ENGINEERS.
Dec. 13. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Col.

NEW ENGLAND RAILROAD CLUB.
Dec. 13. Secy., Edw. L Janes, P O Box 1158, Boston, Mass.

NORTHWESTERN TRACK AND BRIDGE ASSOCIATION.
Dec. 18. Secy., D. W. Meeker, St. Paul, Minn.

THE ENGINEERS' CLUB OF PHILADELPHIA.
Dec. 17. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

CHICAGO ELECTRICAL ASSOCIATION.—At the meeting on Nov. 4 Mr. George A. Damon presented a paper on "The Electrical Equipment of a Model Printing Establishment." The plant referred to is that recently established at Hammond, Ind., by the W. B. Conkey Co. A brief abstract of the paper is given on another page of this issue.

WESTERN SOCIETY OF ENGINEERS.—At the meeting on Nov. 2, a paper on "The Construction of Retaining Walls for the Sanitary District of Chicago," by Mr. James W. Beardsley, was presented. This was illustrated by a number of views showing the walls along the line of the drainage canal. A paper by Mr. Charles V. Kerr, on "The Berthier Method of Coal Calorimetry," was also presented.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES.—At the last meeting of this society, held on Nov. 4, Mr. T. C. Martin, editor of "The Electrical Engineer," presented an illustrated lecture on "Electric Power Transmission." The dangers of over estimating the minimum flow of water of streams was pointed out and attention was called to the interesting fact that the usually progressive Eastern part of the United States was only beginning to use methods of power generation and transmission that had been in use in the West for a considerable time.

FRANKLIN INSTITUTE.—A regular meeting of the Institute was held at 15 South Seventh St., Philadelphia, Pa., on Nov. 8, to listen to a paper by Mr. William A. Rosenbaum on "The Status of Electrical Invention."

In this paper the author traced the progress of electrical invention, starting with Faraday's discoveries in 1831 and pointing out successively what he terms the "mile-stones" of progress, in other words, the root inventions from which have grown up whole classes of industries.

The first of these was the telegraph, and the growth of this now great industry was traced through its successive stages of ribbon recording instruments, sound instruments, simplex, duplex, quadruplex, repeaters and finally "wireless" telegraphy. In the same way the telephone,

electric light dynamo, electric machinery, chemical generation of current and electric railways were taken up and brought down to date.

ENGINEERS' CLUB OF ST. LOUIS.—The 478th meeting of this club was held on Nov. 2, with 31 members and visitors present.

Capt. F. H. Macklind gave an address upon "Roads and Roadways." He pointed out the necessity of good roads to our present civilization and showed how city streets had developed from country roads. The value of various pavements from different standpoints was discussed, and the paper closed by giving the methods used and the cost of cleaning the streets in different cities.

Prof. Kinealy then exhibited a machine for boring triangular, square, pentogonal, hexagonal and octagonal holes. The machine can be used in connection with any drill press, and bores the hole at one operation in about twice the time taken to bore a round hole. The inventor of the machine was introduced to the club, and explained the manner of operating the drill.

Richard McCulloch, Secy.

TEXAS RAILWAY CLUB.—A two days' session of this club was held at Rockport, Texas, on Sept. 15, at which the following papers were read:

"Safety in Train Air-Brake Appliances," F. Hufsmith; "Necessity of Harmony in the Departments of Railway Service," A. S. Grant; "Economy in the Increased Capacity of Cars," N. L. Smitham. There was also a discussion of two papers presented at previous meetings, "Economy in the Use of Fuel," S. R. Tuggle, and "Car Inspection," James McGee.

The next meeting will be held on April 17 at Bryan, Texas, and the following papers will be presented at that time: "The Use of Electric and Pneumatic Power and Tools as Applied to Shop Practice," William Jennings; "The Impression of a Motive Power Man as Gathered in a Trip Abroad," R. H. Soule; "The Responsibility of a Cast Chill Car Wheel Maker; Its Uses and Abuses," E. S. Marshall; "Relative Merits of Improved Metal Draft Gear," J. R. Cade. There will also be a discussion of papers presented at previous meetings.

NEW PUBLICATIONS.

LITERARY MAGAZINES.—The war stories are still with us, as the November magazines bear witness, "McClure's" has an interesting paper in which is included most of the official dispatches which passed between the chief naval officers and the Department in West Indian waters while Cervera's fleet was being tracked to its hiding place in Santiago harbor. In the same magazine, the diary of the British consul at Santiago during the hostilities gives a realistic account of life inside the besieged city and of the suffering that came to the women, children and other noncombatants during its attack and capture. There is also a popular account of Vesuvius and its recent eruption, and of the first ascent of Aconcaqua and Tupungato, two peaks of the Argentine Andes, which are said to be the highest in the Western hemisphere, their altitudes being respectively about 23,000 and 22,000 ft.

The "Nineteenth Century" for October contains a most interesting account of the life of Alfred Nobel, the inventor of dynamite. It is not generally known, we believe, that Nobel came to the United States when 16 years old, and until he was 21 was a pupil of the late John Ericsson. The story of his life with its marvellous successes reads like a romance. As our readers will remember the bulk of his fortune, amounting to $12,500,000, was left to endow a fund the interest of which will be given annually in five prizes for the most important discoveries in chemists, physics, physiology or medicine, for the highest literary work and for the greatest achievements in the promotion of universal peace.

In the October "Fortnightly" we find the first part of the diary of the late Consul Ramsden at Santiago, referred to in our review of "McClure's" above, and also an interesting account of the Congo Free State and the works of civilization which the Belgians have accomplished in Central Africa.

"Harper's" for November has a paper by Archibald Colquhoun on "The Eastward Expansion of the United States." He urges that the United States should join England in demanding "the open door" in China, and his article is one of the best presentations of the arguments for this course that we have anywhere seen. Recent geographic explorations in Central Asia and in the Arctic and Antarctic are summarized in a paper by Mr. J. Scott Keltie. Lieut. John C. Freemont, U. S. N., writes an interesting account of life on the torpedo boat "Porter" during the war, while Frederick Remington tells anew the story of the Santiago duel in such an inimitable fashion that it is a new story to the readers even though he has heard it all before.

In the November "Atlantic" Prof. Ira V. Hollis, of Harvard University, formerly an engineer in the navy, writes on "The Navy in the War with Spain." He warns against the danger of drawing too positive and broad conclusion from isolated experiences in this war. His article is on the whole about the ablest critical review of the navy's work in the present war that we have anywhere seen. President David Starr Jordan has in the same magazine a paper describing the government which the United States has given and still gives to its only colonial possession, Alaska. We know of no more effective presentation that has been anywhere made concerning the urgent need that some radical changes should be made in our system of government, if we are to have placed upon us the responsibility for the government of remote colonies.

In "The Century" for November Lieut. Bradley Fiske, U. S. N., the inventor of the Fiske range finder, describes the Battle of Manila Bay and tells the reasons which he believes explain the wonderful success of the American fleet and the complete loss of the Spanish. Capt. Sigsbee begins a story of the "Maine's" voyage to Havanna and her subsequent destruction, and a French writer tells of the methods by which the Paris Exposition of 1900 is being brought into shape.

The "Contemporary Review" for October contains an excellent article on the Soudan and its possibilities under a civilized rule. There is also a paper concerning the proposed government purchase of the telephone system in England.

"The Powers of the Interstate Commerce Commission" is the subject of a paper in the "North American Review," by Hon. Chas. A. Prouty, of the Commission, and he presents in a perfectly clear manner the reasons why the amendment of the law, giving the Commisssion authority to compel readjustment of rates, should be made. "National Public Health Legislation" is the title of another paper in the same magazine that deserves mention here.

"Appleton's Popular Science Monthly" for November contains a paper on "Possible Fiber Industries of the United States," in which the possibilities in the cultivation of flax, ramie, jute, etc., are well set forth. Mr. Edgar R. Dawson has a brief popular description of Swiss methods of river regulation, and a French Scientist discusses the causes of rain.

The article in the November "Review of Reviews" of most interest to engineers are two papers on the Nicaragua Canal, by Prof. L. M. Keasbey, author of "The Nicaragua Canal and the Monroe Doctrine," and Emory R. Johnson. The former writer discusses the internation aspect of the canal enterprise and thinks that there would be little difficulty now in securing a revision of the Clayton-Bulwer treaty which would permit us to build and control the canal without friction with England. Prof. Johnson discusses the effect of an Isthmian canal upon the commercial interests of the United States, and gives some tables of distances by various routes. He does not, however, give any figures as to the volume of traffic that might be expected to use a canal if it were built.

The November "Cosmopolitan" contains a popular account of modern methods of placer gold mining, by John E. Bennett, a paper by Joseph Leiter, describing the development of the system of purchasing, warehousing and transportation under which the wheat crop of the Northwest is now handled from the farmer to the consumer, and an account of the marvellous career of Ernest Terah Hooley, the prince of company promoters, who in the course of a couple of years made and lost the comfortable sum of $35,000,000.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3 1-2 x 6 ins.; 6 x 9 ins., and 9 x 12 ins.)

STONE SAWING MACHINES.—Lincoln Iron Works, Rutland, Vt. Pamph., 9 x 6 ins; pp. 16; illustrated.

This pamphlet describes some of the standard stone sawing machines made by the company named. The designs show machines with screw feed, gravity feed, and various patent feeding devices, straight cut gang saws, circular saws for soft stone, and various fittings and sundries.

DRAWING MATERIALS AND SURVEYING INSTRUMENTS.—Eugene Dietzgen Co., 183 Monroe St., Chicago. Paper, 4½ x 6 ins.; pp. 161.

This is a compact and comprehensive catalogue and price list of drawing instruments and supplies, surveying and optical instruments, etc. Among the drawing materials are lettering angles, which are rectangular set squares, having the upper edge slotted at the various angles for different letters of a given style. A device for printing titles, etc., on maps or drawings, is also shown.

DEPRECIATION OF CANDLE-POWER OF WELSBACH MANTLES.—General Electric Co., Schenectady, N. Y. Circular; 3½ x 5 ins.

This little circular gives a number of interesting items relative to the depreciation of candle-power of Welsbach mantles for gas lamps and of incandescent electric lamps, based upon actual tests. The conclusion drawn is that the electric lamp falls off in efficiency less rapidly than the gas lamp. Attention is briefly called to the enclosed arc lamps manufactured by the General Electric Co.

CORRUGATED STEEL WORK.—Cincinnati Corrugating Co., Piqua, Ohio. Paper; 8 x 6 ins.; pp. 9; illustrated.

This firm makes corrugated steel arches, and here gives tables setting forth thickness of sheet, loads and deflections for spans ranging from 4 to 10 ft., and with several types of corrugations. They also manufacture iron and steel roofing, steel lath, iron doors and shutters, etc. The corrugated sheets are made with a patent edge, for which great advantages are claimed in fastening, watertight qualities, efficiency, strength and economy in metal.

SKYLIGHTS WITHOUT PUTTY.—Vaile & Young, Baltimore, Md. Pamph., 6 x 9 ins.; pp. 32; illustrated.

The special feature of this skylight construction is the sash or framework which carries the glass. This consists of an open, tubular supporting bar, which acts also as a gutter, and a cap which lies close to the glass on top. This cap is of lead, and is designed to make a water tight joint with the glass, but should leakage occur, the gutter-shaped bar carries the water away safely. The bar is usually made of galvanized iron, but copper is also employed when specified. This pamphlet describes and illustrates the various standard skylight constructions of this system, and shows views of a number of the important structures in which they have been used. Among these we note the new Library of Congress building, the works of the Maryland Steel Co., the new conservatories at Druid Hill Park, in Baltimore, Md., and several large train sheds.

METAL SKYLIGHTS AND LATHING.—George Hayes, 71 Eighth Ave., New York. Paper; 10 x 6¾ ins.; pp. 85; illustrated.

The Hayes method of building skylights and other glazed structures was invented about 30 years ago and has been since widely applied. This pamphlet illustrates and describes the many forms in which it is used, together with the special appliances employed with it. The second part of the pamphlet treats of metal lathing and a system of fireproof construction adapted to buildings of all types. This lathing is corrugated, expanded and punctured, and has lipped and tongued apertures, and is claimed to be a perfect mortar-holding device and a brace to the wall as well. The text illustrates and describes it as used in a multitude of forms and for many purposes, both in iron and in wood construction.

STANDARD CRABS AND WINCHES.—Brown Hoisting & Conveying Machine Co., Cleveland, O. Circular.

This circular illustrates, describes and prices the Weston patent crabs and winches, formerly made by the Yale & Towne Mfg. Co., but now manufactured by this company. The standard crabs range in lifting capacity from ½ to 2½ tons; weigh from 226 lbs. to 812 lbs., and cost, for crabs alone, from $35 to $100. The winches have a similar capacity; weigh from 215 to 864 lbs., and cost from $35 to $100. The feature of these crabs and winches is the safety-brake, which makes it impossible for the load to run down; and the load will not lower unless the cranks are turned backwards, and motion ceases when the cranks are released.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work.	Place.	See Eng. News.
Nov. 10.	Water supply, Belem, Brazil		Sept. 22
Nov. 10.	Water bonds, ($30,000),	New Richmond, O.	Oct. 20
Nov. 10.	College building,	Cincinnati, O.	Oct. 20
Nov. 10.	Court house bonds,	Doniphan, Mo.	Oct. 20
Nov. 10.	Building repairs,	Brooklyn, N. Y.	Nov. 3
Nov. 10.	Summit Ave. improvement,	St. Paul, Minn.	Nov. 3
Nov. 10.	Boiler house,	Morris Plains, N. J.	Nov. 3
Nov. 10.	Electric plant,	Wynne, Ark.	Nov. 3
Nov. 10.	Steel and iron bridges,	Savannah, Ga.	Nov. 3
Nov. 10.	Gas well,	Buffalo, N. Y.	Nov. 3
Nov. 10.	Macadam road,	Enfield, Mass.	Nov. 3
Nov. 10.	Water-works,	Wynne, Ark.	Nov. 3
Nov. 10.	Electric light poles,	Ottawa, Ont.	Nov. 10
Nov. 10.	Sewer bonds,	Nyack, N. Y.	Nov. 10
Nov. 10.	Conduit system,	Erie, Pa.	Nov. 10
Nov. 10.	Sidewalks,	Findlay, O.	Nov. 10
Nov. 10.	Gas and electric fixtures,	Milwaukee, Wis.	Nov. 10
Nov. 10.	Extending canal,	New Orleans, La.	Nov. 10
Nov. 11.	Sewage disposal plant,	Madison, Wis.	Nov. 10
Nov. 11.	Paving, etc.,	Wilmette, Ill.	Nov. 10
Nov. 11.	Brick sewers,	Chicago, Ill.	Nov. 10
Nov. 11.	Dredging the Erie basin,	Buffalo, N. Y.	Nov. 3
Nov. 12.	Water bonds ($130,000),	Reno, N. Mex.	Oct. 13
Nov. 12.	Buildings ($106,250),	Mare Island, Cal.	Oct. 20
Nov. 12.	Dredging,	Port Royal, S. C.	Oct. 20
Nov. 12.	Road work,	Cincinnati O.	Oct. 27
Nov. 12.	Fire alarm system,	Lancaster, O.	Nov. 3
Nov. 12.	Sewers,	Jerseyville, Ill.	Nov. 10
Nov. 12.	Heating, etc.,	St. Thomas, Ont.	Nov. 10
Nov. 13.	Bridges,	Hoosick Falls, N. Y.	Nov. 10
Nov. 14.	Bridge over Cedar River,	Waverly, Ia.	Nov. 3
Nov. 14.	Repairing pumping engines,	Boston, Mass.	Nov. 3
Nov. 14.	Grading a road,	Santa Barbara, Cal.	Oct. 27
Nov. 14.	Steel bridge (100 ft.),	Houston, Tex.	Oct. 20
	Advertised, Eng. New, Oct. 20 to Nov. 3.		
Nov. 14.	Removing wreck,	Rockland Harbor, Me.	Oct. 13
Nov. 14.	Macadamizing,	Berkeley, Va.	Nov. 10
Nov. 14.	School building, etc.,	Boston, Mass.	Nov. 10
Nov. 15.	Water pipe, pumps, etc.,	Havana, Cuba.	Nov. 10
Nov. 15.	Naval supplies,	Washington, D. C.	Nov. 10
Nov. 15.	Firemen's home,	Newark, N. J.	Nov. 10
Nov. 15.	Reservoir,	Irvington, N. Y.	Nov. 10
Nov. 15.	Lift bridge,	Canajoharie, N. Y.	Nov. 10
Nov. 15.	Water-Works,	Jonesville, Mich.	Nov. 10
Nov. 15.	Industrial school,	Ellendale, N. Dak.	Oct. 13
Nov. 15.	Water-works addition,	Seattle, Wash.	Sept. 22
	Advertised, Eng. News, Sept. 22 to Nov. 10.		
Nov. 15.	Jail work,	San Saba, Tex.	Sept. 29
Nov. 15.	Electric lighting,	Greensboro, N. C.	Oct. 6
Nov. 15.	Dredging bay,	Coos Bay, Ore.	Oct. 20
	Advertised, Eng. News, Oct. 20 to Nov. 10.		
Nov. 15.	Water-works,	Rock Hill, S. C.	Oct. 27
	Advertised, Eng. News, Oct. 27 and Nov. 3.		
Nov. 15.	Machinery and tools,	Norfolk, Va.	Nov. 3
Nov. 15.	Electrical machinery,	Portsmouth, N. H.	Nov. 3
Nov. 15.	Bridge (131 ft. long),	Canal Fulton, O.	Nov. 3
Nov. 15.	Well,	Elburn, Ill.	Nov. 3
Nov. 16.	Rebuilding sewers,	New York, N. Y.	Nov. 3
Nov. 16.	Reformatory building,	Mansfield, O.	Oct. 27
Nov. 16.	Electric plant,	Knowle, England.	Oct. 27
Nov. 16.	Electrical machinery,	Cleveland, O.	Oct. 20
Nov. 16.	Electric lighting,	Camden, N. J.	Oct. 13
	Advertised, Eng. News, Oct. 13 to 27.		
Nov. 16.	Park work,	Cleveland, O.	Nov. 10
Nov. 16.	Fire apparatus,	New York, N. Y.	Nov. 10
Nov. 16.	Buildings (2),	New York, N. Y.	Nov. 10
Nov. 17.	Road gravel,	Los Angeles, Cal.	Nov. 10
Nov. 17.	Hospital building,	Siletz, Ore.	Oct. 27
Nov. 17.	Road in Sage Canyon,	Cal.	Oct. 27
Nov. 17.	School building,	Passaic, N. J.	Nov. 3
Nov. 17.	Water-works,	McComb, Miss.	Nov. 3
Nov. 18.	Building materials,	Chemawa, Ore.	Nov. 3
Nov. 19.	Local sewers,	Evansville, Ind.	Nov. 3
Nov. 19.	Water bonds ($22 000),	Bainbridge, N. Y.	Nov. 3
Nov. 19.	Wooden wharf,	Washington, D. C.	Nov. 10
Nov. 19.	Electric light plant,	Concord, Mass.	Nov. 10
	Advertised, Engineering News, Nov. 10.		
Nov. 21.	Macadamizing,	Plainfield, N. J.	Nov. 10
Nov. 21.	Street bonds,	Norwood, O.	Nov. 10
Nov. 21.	Bridges,	Los Angeles, Cal.	Nov. 10
Nov. 21.	Iron fence, etc.,	Cleveland, O.	Nov. 3
Nov. 21.	Brick sewers,	Toledo, O.	Oct. 27
Nov. 21.	Naval supplies,	St. Augustine, Fla.	Oct. 27
	Advertised, Eng. News, Oct. 27 to Nov. 17.		

Nov. 21. Government bldgs (8), Sophia, Bulgaria....Sept. 29
Nov. 22. U. S. building, Norfolk, Va. .....Oct. 27
Advertised Eng. News, Oct. 27 and Nov. 3.
Nov. 22. Bridge foundations, Washington, D. C.....Nov. 3
Advertised, Engineering News, Nov. 3.
Nov. 22. Electric plant, Fredericksburg, Va.....Nov. 10
Advertised, Eng. News, Nov. 10 and 17.
Nov. 23. Sewers, Elkhart, Ind. .....Nov. 10
Nov. 24. Brick sidewalk, Huntington, W. Va.....Nov. 3
Nov. 25. Water pipe, etc., Honolulu, H. I. .....Oct. 27
Nov. 25. Rebuilding wall, New York, N. Y.....Nov. 10
Nov. 25. Rebuilding pump, Cleveland, O. .....Nov. 10
Nov. 25. Cleaning streets, Cleveland, O. .....Nov. 10
Nov. 26. Boilers, Brooklyn, N. Y.....Nov. 10
Nov. 26. Crane, Port Royal, S. C. .....Oct. 27
Nov. 26. Boat shelter roof, Mare Island, Cal. .....Oct. 20
Nov. 26. Sawmill, chimney, etc., Mare Island, Cal...Nov. 3
Nov. 28. Removing wreck, Port Chester, N. Y.....Nov. 3
Advertised, Eng. News, Oct. 27 to Nov. 17.
Nov. 28. Water-works, Florence, Colo .....Nov. 3
Advertised, Eng. News, Nov. 3 and 10.
Nov. 28. Sewers, North Bend, Ind. .....Nov. 3
Nov. 28. Heating plant, Henderson, Colo. .....Nov. 3
Nov. 28. Tubular boilers, (2), San Francisco, Cal. ..Nov. 3
Nov. 28. Removing wreck, Portchester Harbor, N. Y.Oct. 27
Nov. 28. Electric plant, Denver, Colo. .....Nov. 10
Nov. 28. Tug boat, San Francisco, Cal. .....Nov. 10
Nov. 28. Mailing platform and shed, New York....Nov. 10
Advertised, Eng. News, Nov. 10 and 17.
Nov. 29. School building, Fort Berthold, N. Dak. ...Nov. 10
Nov. 29. Condenser tubes, Mare Island, Cal. .....Nov. 10
Nov. 29. Scales, etc., Washington, D. C. .....Nov. 10
Nov. 29. Water-works, Ft. Berthold, N. Dak.....Nov. 3
Nov. 30. Dry dock, Algiers, La. .....Oct. 20
Nov. 30. Bridge, etc., and plans, Moline, Ill.....Oct. 6
Advertised, Eng. News, Oct. 6 and 13.
Nov. 30. Water-works, McKinney, Tex. .....Nov. 10
Nov. 30. Steel arch bridge, Victoria, B. C. .....Nov. 10
Dec. 1. Electric light plant, Clinton, Ill. .....Nov. 10
Dec. 1. Electric plant, Orilla, Ont. .....Nov. 10
Dec. 1. Business building, Cleburne, Tex. .....Nov. 10
Dec. 1. Seawall, S. I., N. Y. .....Nov. 10
Advertised, Eng. News, Nov. 10 and 17.
Dec. 1. Garbage collecting, Jersey, City, N. J.....Nov. 10
Dec. 1. Electric lighting, Sumter, S. C. .....Oct. 6
Dec. 1. Electric light plant, Clinton, Ill. .....Oct. 13
Dec. 2. Arc lighting, Asheville, N. C. .....Oct. 13
Dec. 5. Pumping engine, Oil City, Pa. .....Oct. 27
Advertised, Eng. News, Oct. 27 to Nov. 10.
Dec. 5. Removing wreck, Philadelphia, Pa. .....Nov. 10
Dec. 5. Water-works, West Tampa, Fla. .....Nov. 10
Advertised, Eng. News, Nov. 10 to 24.
Dec. 5. Court house, Garner, Ia. .....Nov. 10
Dec. 6. Canal, Tampico, Ill. .....Nov. 10
Advertised, Eng. News, Nov. 10 to Dec. 1.
Dec. 6. Street bonds, Springfield, O. .....Nov. 3
Dec. 7. Changing Van Buren St. bridge, Chicago, Ill.Oct. 20
Dec. 7. Torpedo storehouse, Fort Caswell, N. C.....Nov. 10
Advertised, Eng. News, Nov. 10 to Dec. 1.
Dec. 8. Bridge approach, Zanesville, O. .....Nov. 10
Dec. 8. Lease of water power, Indianapolis, Ind....Nov. 3
Dec. 10. Intercepting sewers, Washington, D. C.....Nov. 3
Advertised, Engineering News, Nov. 3.
Dec. 10. Crane (100 tons capacity), Brooklyn, N.Y...Nov. 10
Dec. 15. Storm sewers, Denver, Colo. .....Oct. 13
Dec. 21. Court house annex, Atlanta, Ga. .....Nov. 3
Dec. 22. Superstructure, Lorain, O. .....Nov. 3
Dec. 22. Bridge superstructure, Lorain, O. .....Nov. 10
Advertised, Eng. News, Nov. 10 and 17.
Dec. 31. Plans for station, etc., Stockholm, Sweden.June 23
Jan. 1. City hall plans, Bridgeport, Conn. .....Aug. 18
Jan. 2. Bridge, Quebec, Que. .....Sept. 20
Advertised, Eng. News, Sept. 29 and Oct. 6.
Jan. 2. Arc lighting, Vincennes, Ind. .....Oct. 27
Jan. 6. Water-gas plant, Johannesburg, So. Africa..Oct. 27
Jan. 6. Extension, electric plant, Johannesburg, S. Af. Oct. 27
Jan. 24. Footway tunnel, London, England. .....Nov. 10
Feb. 2. Electric lighting, New Orleans, La. .....Nov. 3
Feb. 10. Jail building, Keyser, W. Va. .....Sept. 29
No date. Water-works, Tempe, Ariz. .....Nov. 10
" .Steam heating, Augusta, Me. .....Nov. 10

RAILWAYS.

ATLANTIC COAST LINE.—F. Gardner, Ch. Engr., Wilmington, N. C., informs us that bids were received from the following contractors, Nov. 4, for the grading and trestle work on the extension of the Charleston & Western branch from Denmark to Robbins, N. C., a distance of 34.7 miles, as advertised in Engineering News: A. & C. Wright Co., Richmond, Va.; M. N. Moorman, Lynchburg, Va.; Geo. W. Calahan, Knoxville, Tenn.; Abercrombie & Williams, Montgomery, Ala.; B. O. Watkins, Birmingham, Ala.; Lane Bros. & Co., Esmont, Va.; V. E. Steen, Kansas City, Mo.; L. B. Lacy, Anniston, Ala.; Walker & Oliver, Langley, S. C.; Dunn & Leland Bros., Birmingham, Ala.; Mason, Hoge & Co., Frankfort, Ky.; Douglas, Frick & Nordin, Baltimore, Md.; Batchelder & McGruder, Winston, N. C. The bid of A. & C. Wright Co. was accepted.

CLEARWATER VALLEY.—This company has been incorporated in Oregon, with an authorized capital stock of $3,000,000, to build and operate several hundred miles of railway and telegraph lines in Oregon, Washington and Idaho, the line to Clearwater being the chief of those projected. The incorporators are: W. H. Kennedy, Ch. Engr. of the Oregon River & Navigation Co., Portland, Ore., and C. W. Mulks, J. C. Haveley and Charles Steel, all of whom are connected with this same company.

CUBA.—Congressman John Dalzell is said to be one of a party of Pennsylvania capitalists which is investigating the district around Santiago with a view to the construction of a railway connecting Santiago and Havana.

DALLAS TERMINAL.—A meeting of the stockholders of this company will be held at Dallas, Tex., on Dec. 10, to take action on a proposed amendment of the charter, which will permit of an extension of the line from Dallas to Fort Worth, a distance of 32 miles. The issue of about $1,000,000 in bonds is contemplated. W. C. Connor, Pres., Dallas.

DENMARK.—Press reports state that the Danish state railway authorities, at Copenhagen, are asking for bids on 2,[illegible] tons of steel rails, 133 tons of fish-plates, 17½ tons of fish-bolts and nuts and 66 tons of nails. Early in October many European manufacturers were trying to secure the business, and, up to that time, no American concern had made any effort to compete. Many orders for railway material from Copenhagen are going both to Germany and England. The buyers are obliged to wait a long time for delivery of goods, which would not be the case if the Americans secured the orders, a fact which is much in their favor.

DETROIT & MACKINAC.—Reports from Bay City, Mich., state that Prescott & Sons are building a branch line from Prescott, on the Detroit & Mackinac, to Hiles Lake, through a pine timbered district. J. D. Hawks, Pres. and Gen. Mgr., Detroit, Mich.

FAIRCHILD & NORTH EASTERN.—G. W. Godfroy, Ch. Engr., Fairchild, Wis., informs us that grading and tracklaying is in progress on the extension of this road from Greenwood northeast to Beaver, Wis., a distance of five miles, and work will be completed by Dec. 1. Contractor, Jas. W. Gorman, Minneapolis, Minn. Pres., N. C. Foster, Fairchild.

GALETON & LEETONIA.—This company was incorporated in Pennsylvania, Nov. 1, with a capital stock of $330,000, to construct a steam railway between Germania and Leetonia, Pa., a distance of about ten miles. The incorporators are: Chas. H. Rexford, Pres.; W. A. Rexford, J. L. Snyder, J. R. Dangle and Harry J. Wilcox, all of Galeton, Pa.

GREAT NORTHERN.—This company is said to intend making application to the next session of the Canadian Parliament for a franchise to extend the Spokane Falls & Northern through Southern British Columbia. The real object is represented to be a paralleling of the Crow's Nest Pass branch of the Canadian Pacific through Southern British Columbia, in addition to the Kettle River line. ——Track laying has been almost completed on the extension of the Great Northern from Cass Lake, on the new Fosston branch, south to Akely, Minn., 13 miles.——Construction is expected to be undertaken next spring on a new cut-off which has just been surveyed from Coon Creek north about 50 miles to Brook Park, via Cambridge, Minn. N. D. Miller, Ch. Engr., St. Paul, Minn.

GULF, BEAUMONT & KANSAS CITY.—Reports state that the surveyors have finished locating the line of the proposed road from Orange to Kirbyville, Tex., and that several miles of the right of way have been cut. Construction is expected to begin soon. Jas. F. Weed, Ch. Engr., Beaumont, Tex., informs us that this company has just received 1,000 tons of 56-lb. steel rails, from the Carnegie Steel Co., to be used on this 11-mile extension from Kirbyville, which will be ready for operation about Feb. 1.

HOCKING VALLEY & LAKE ERIE.—W. H. Jennings, formerly connected with the Columbus, Hocking Valley & Toledo Ry., is said to be chief engineer of this railway projected to run from Athens to Toledo, via Columbus, O., and for the construction of which contracts are said to have been let. The line must be completed by Jan. 1, 1900.

IOWA.—Reports state that L. F. Wakefield, Engr., Sioux City, Ia., is in charge of a corps of surveyors now at work in South Sioux City surveying a route for a new line of railway. There is a rumor to the effect that a syndicate has been formed to construct a line from Sioux City to Omaha which will go down on the Nebraska side of the Missouri River, and will be when surveyed about 25 miles shorter than either of the Sioux City & Pacific or the Omaha.

IOWA CENTRAL & WESTERN.—This company was incorporated in Iowa, Oct. 29, with a capital stock of $3,000,000, to construct a line from Oskaloosa to Des Moines, Ia.; also a line intersecting the Iowa Central Ry. at or near Belmont to Algona and thence northwesterly to the northern state line. The incorporators are: Pres., L. M. Martin, Gen. Mgr. of Iowa Central; George W. Seevers and C. E. Lofland, of Oskaloosa; Seth Zug and P. E. Bousquet, of Pella.

LEADVILLE MINERAL BELT.—This company has been incorporated in Colorado, with a capital stock of $100,000, to construct a belt line tapping the rich ore gulches in Lake and Park counties. The incorporators are: Frank Trumbull, Receiver of Union Pacific, Denver & Gulf Ry., Denver, Colo.; A. D. Parker, H. W. Cowan, Elmer E. Whitted and I. R. De Remer.

MICHIGAN.—The East Jordan Lumber Co., of East Jordan, Mich., expects to build a 10-mile standard-gage line this fall south to its lumber lands. Surveys are now being made. All material has been purchased for the first ten miles. A farther extension of eight miles to Antrim is contemplated.——A railway from Greenland to Houghton, Mich., 70 miles, is said to be projected by Richardson, Hill & Co., of Boston, and other firms.

MIDLAND & NOVA SCOTIA.—Reports state that this company has decided to build its line from Windsor to Truro, N. S., 60 miles, via Clifton, which town has voted a bonus of $30,000, and that work between Five Mile River and Truro would be at once vigorously undertaken. Most of the earthwork between Windsor and the Shubenacadie River has been done. Pres., William Strachan, Montreal, Que.

MUSCATINE, NORTH & SOUTH.—W. L. Willis, Ch. Engr., Wapello, Ia., is reported as saying that the road bed of this new line has been graded to the Iowa River, a distance of ten miles, and most of the heavy work done on eight miles on the other side of the river. Stirling Birmingham, Vice-Pres. and Secy., 120 Broadway, New York.

NEW YORK & OTTAWA.—The supreme court of New York, has rendered a decision which, if sustained by the higher courts, will prevent the construction of an extension of this line to a connection with the Adirondack Ry., at North Creek, N. Y., and thereby frustrate the plan for shortening the distance by rail between New York and Ottawa by 59 miles. The proposed line would run through the Adirondack Park Preserves, which is declared to be unlawful.

NORTON BAY & YUKON RY. & NAVIGATION.—Bids are being asked by the Anglo-Alaskan Syndicate, Ltd., of London, according to reports, for rails and rolling stock for this proposed 76-mile line in the Yukon district, from a point 45 miles northeast of St. Michael, Alaska, to the Yukon River, 35 miles below Nulato. F. A. Hill, Ch. Engr., National Bank Bldg., Seattle, Wash.

NORTHERN PACIFIC.—This company has filed papers in the Waterville land office asking for ten miles of right of way from Lake Chelan to the Columbia River, in Washington.

NOVA SCOTIA.—The ratepayers of Amherst, N. S., have decided to make a subsidy towards the construction of a railway from Amherst to North Point, on the Northumberland Straits, a distance of 20 miles.

OSHKOSH & STEVENS.—Albert Schaeffer, St. Paul, Minn., and J. W. Edwards, of Winneconne, Wis., are said to be the incorporators of this company, which expects to build a railway between these two cities in Wisconsin, via Almond, a distance of about 70 miles. Surveys have been commenced; a part of the line will be built at once.

PENNSYLVANIA.—Bids are asked until Nov. 12, according to reports, for constructing 5¼ miles of railway to a connection with the Baltimore & Ohio Ry. at Layton, Pa., including several bridges. Engrs., Taylor & Romine, McKeesport, Pa.

PERRIS & LAKE VIEW.—This company is reported to have been incorporated in California, with a capital stock of $80,000, to construct a standard gage road from Perris in a northeasterly direction to Lakeview, Cal., 8.05 miles. The directors are: W. C. Nevins, G. Holterhoff, E. Chambers, H. J. Stevens and A. P. Maginnis.

PITTSBURG & WESTERN.—Reports state that contracts for the construction of nine miles of new track on this line near Harmony, Pa., have been let. The work is to be done on the proposed double track line between Pittsburg and New Castle, Cal., and will be completed early next year. Paul Didier, Asst. Ch. Engr., Allegheny, Pa.

RIO GRANDE, SIERRA MADRE & PACIFIC.—This company is said to have decided to build an 80-mile narrow gage railway, which will branch off from the present terminus at Casa Grande, Mexico, and traverse the mineral and heavily timbered region to the west known as the Yaqui gold country. The main line of the railway now connects El Paso and Juarez with Casa Grande, and is 150 miles long. When the narrow gage line connects with the timber region the value of the line to El Paso will be greatly increased. Work on the new railway will soon begin. Pres., A. Foster Higgins, 54 Exchange Place, New York; Ch. Engr., J. Fewson Smith, El Paso, Tex.

SPRING GARDEN CONNECTING.—The committee on corporations, of Allegheny, Pa., has favorably recommended the ordinance granting a franchise to this company. The road will be a branch of the Pittsburg & Western line, run over the tracks of the West Penn and over Ohio St., west of McFadden St., above grade, tunnel Troy Hill to Spring Garden Ave., and run thence to Valley St., so as to reach Lappe's and other tanneries in that section. The company was incorporated Jan. 24 with a capital stock of $200,000, by William Kirkland, Frank Felkel and Jas. D. Swindell, the last named being from Allegheny, Pa.

ST. LAWRENCE RIVER & ADIRONDACK.—This company has been incorporated, with an authorized capital stock of $3,000 a mile, to construct a line from the St. Lawrence River to North Creek, following the Raquette River to its source, a distance of about 100 miles. Pres., L. S. Putney; Vice-Pres., O. E. Martin; Secy., H. G. Atwater; Treas., J. G. McLeod

VIRGINIA.—Surveys are now being made, according to reports, for a proposed railway across Frederick county, Virginia, which is designed to bring the rich coal fields and timber lands of West Virginia within easy reach of the East, North and South.

WEST VIRGINIA SHORT LINE.—Surveys have been completed for this proposed railway from Clarksburg to New Martinsville, W. Va., a distance of about 60 miles. Construction work is expected to begin shortly.

STREET AND ELECTRIC RAILWAYS.

MARLBORO, MASS.—It is reported that the power house for the Hudson, Marlboro and Framingham divisions of the street railway will be on Maple St., Marlboro. An addition to the present power house, 37 × 50 ft., is being built. A new 300-HP. engine and generator will be installed and will be utilized in addition to that already in use.

MILFORD, MASS.—The selectmen have granted a franchise to the Milford, Woonsocket & Attleboro St. Ry. Co. George W. Wiggin, of Franklin, Mass.; E. J. Whittaker, Wrentham, Mass., are interested.

MERIDEN, CONN.—The Meriden, Middletown & Waterbury R. R. Co. has been incorporated, with an authorized capital of $100,000. It is believed that electricity will be the motive power. Judge A. Heaton Robertson is said to be interested.

MIDDLETOWN, N. Y.—William B. Royce, of Middletown, has been appointed receiver of the Middletown & Goshen Traction Co., which operates an electric street railway from Middletown to Goshen, and a small park in connection therewith, by Justice Pryor, of the Supreme Court, on the application of Ferdinand McKeige, Hugh H. Douglass, W. A. Granterin, and other directors. The company had an office at 35 Nassau St., New York.

ALBANY, N. Y.—It is reported that work will be resumed on the construction of the Greenbush & Nassau Electric Ry., under new management. Surveyors are again at work on the proposed route in East Greenbush.

LITTLE FALLS, N. Y.—The council has granted an extension of one year in which work is to be commenced on the Little Falls & Herkimer Electric St. Ry. Gen. Lansing said the company would certainly build the road in the spring and all that was keeping them back now was the obstacles to completing the preliminary work.

SCHUYLERVILLE, N. Y.—An electric railway will soon be constructed between Schuylerville and Greenwich, according to reports. J. D. Powers, of Sandy Hill, N. Y., is interested in the project.

BOUND BROOK, N. J.—It is reported that the Brunswick Traction Co. has completed its trolley line between Bound Brook and Plainfield, a distance of eight miles. Pres., E. H. Radel, New Brunswick, N. J.

JERSEY CITY, N. J.—Mayor Hoos has signed the ordinance granting to the North Hudson St. Ry. Co. the privilege of changing the motive power of its Grove St. line from horses to electricity.

HATBORO, PA.—The Hatboro Ry. Co. was incorporated in Pennsylvania Nov. 1, with a capital stock of $30,000, to construct an electric street railway from Hatboro to Willow Grove. The incorporators are, James McGregg, James Van Horn, Sam. J. Garner, Jas. W. Rusling and R. Ashurst, Philadelphia, Pa.

WASHINGTON, D. C.—Permission has been granted the Capital Ry. Co. by the district commissioners for an extension of its line from Congress Heights through Pencote Woods to the Alexandria branch of the Baltimore & Ohio R. R.——O. T. Crosby, C. A. Lieb and F. A. Stevens have purchased a controlling interest in the bonds of the Washington & Anacostia Ry. It is reported to be the intention of these gentlemen to equip the line with underground electricity. They have already succeeded in getting the affairs of the Eckington Ry. and its allied lines in such shape that now, under the name of the City & Suburban, contracts have been made and the work commenced of installing the underground electric system. The installation on G St. will be kept until the last.——The district commissioners have authorized the Washington & University R. R. Co. to issue bonds and stock to the amount of $175,000 in order to build and equip their line. This road will start at Quincy St. and Wisconsin Ave., running west and north past the American University to the District line. It will be double track, about three miles long, and concrete will replace the wooden ties ordinarily employed. J. D. Croissant, Washington, D. C.——The Columbia Ry. Co. has obtained all but one parcel of land for their right of way and this is now being condemned. Construction will begin immediately.——The district commissioners have allowed the Capital Ry. Co. 60 days longer in which to experiment with the Brown system of underground propulsion.

NEWPORT NEWS, VA.—The Peninsular Ry Co., composed of W. A. Post, Frank Lee, A. L. Parker, W. E. Cottrell, L. P. Stearnes, J. A. Willett and J. G. Livezay, have applied to the council for a franchise for the construction of a new street railway in this city.

CANTON, O.—The council has passed an ordinance granting the Canton & Massillon Electric Ry. Co. a franchise to build an electric railway over Navarre St. and Dueter Ave.

CAMDEN, O.—The Camden, Dunkirk & Albany Traction Co. has been incorporated with a capital stock of $150,000 to build apparently over the same route as that proposed by the Albany, Dunkirk & Camden Traction Co. The incorporators are, G. W. and J. A. Simpson, of Chicago, Ill., and Geo. W. Whittaker, Dunkirk, Ind.

DAYTON, O.—Reports state that the surveys of the Dayton, Spring Valley & Wilmington Electric Ry. have been begun under the direction of General Manager J. M. Wilson.

KENDALLVILLE, IND.—The commissioners of Noble county have granted a franchise to the Northern Construction Co. to build an electric railway through the county. The promoters of the enterprise have secured the necessary privileges to build the road from Logansport to Kendallville. Steps will be taken at once to commence work.

MARYSVILLE, O.—M. A. Wright and others have petitioned the county commissioners for a right of way for an electric railway connecting Richwood, Pharisburg and Magnetic Springs with Marysville. Work is expected to begin about April 1.

ANDERSON, IND.—N. N. Morse representing capitalists of Indianapolis, Ind., has filed a petition with the county commissioners for a franchise to build an electric railway from Anderson to Ingalls, via Pendleton.

OWOSSO, MICH.—W. H. Avery and others, of Detroit, Mich., are said to be investigating the construction of an electric railway through Owosso which will be a continuation of the line from Detroit to Pontiac.

SAGINAW, MICH.—Press reports state that Fitzgerald & Co., of Lincoln, Neb., have been awarded the contract for the construction of that part of the Saginaw Suburban Ry. between Bay City and Flint. The old right of way of the Rapid Transit Co. between Bay City and Saginaw will be used. President Swarthout, of Saginaw, may be addressed.

STILLWATER, MINN.—It is reported that Thomas Lowry, of Minneapolis, and others, contemplate the construction of a new street railway in this city to connect with the Wildwood line.

LAWRENCE, KAN.—Frank Kern of Mattoon, Ill., has accepted the electric railway franchise granted by this city.

INDEX, WASH.—The Sunset Falls Power Co. is having a line surveyed for a proposed electric road from Index up the north fork of the Skykomish to Galena. The company's power house will be at Sunset and Eagle Falls on the Skykomish River.

LOS ANGELES, CAL.—A. B. Patton has been granted six months extension of time within which to begin the construction of the proposed electric railway to Whittier, the franchise for which was granted May 3.

TOKIO, JAPAN.—Press reports state that the Siemens & Halske Electric Co. is considering a proposition from the Japanese government to form in Chicago a syndicate with a capitalization of about $10,000,000 to install and operate all electric street car lines and incandescent lighting and electric power plants which are to be established in the domain of the mikado as another step in the modernizing of the principal cities of Japan.

ELECTRIC LIGHT AND POWER.

CONCORD, MASS.—Bids are asked until Nov. 19 for installing the steam and water piping in the light plant, as stated in our advertising columns. Stone & Webster, Engrs., 4 Post Office Square, Boston; R. F. Barrett, Chn. Bd.

MILTON, MASS.—It is stated that a controlling interest in the Milton Electric Light & Power Co. has been purchased by parties who control the Hyde Park and Dedham electric plants. The new company will probably enlarge the plant and furnish the power for the new electric road.

NORTH TONAWANDA, N. Y.—The Niagara Falls Power Co. is reported to have been granted a franchise in this city.

UNADILLA, N. Y.—D. R. Buckley, Supt. Standard Light, Heat & Power Co., writes us that the following contracts have been let for furnishing the equipment for the plant, it to have a capacity for 70 2,000-c. p. arc and 2,500 16-c. p. incandescent lights: Water-wheels, Jas. Leffel & Co., Springfield, O.; electrical work, General Electric Co., Schenectady, N. Y.; boilers, Abendroth & Root Mfg. Co., 28 Cliff St., New York.

ASBURY PARK, N. J.—The committee is reported as soliciting information for the proposed plant. T. F. Appleby, Cy. Clk.

LANCASTER, PA.—We are informed that everything is completed for the extension of the plant of the Lancaster Electric Light, Heat & Power Co. excepting a few circuits for incandescent lights.

WRIGHTSVILLE, PA.—It is stated that the Merritt-Chapman Wrecking Co., New York, has secured from the Martic Water & Power Co. the contract for rebuilding the Columbia dam.

BIG STONE GAP, VA.—The Virginia Tanning & Extract Co. is in the market for a dynamo, etc., of about 250 incandescent lights, according to reports.

FREDERICKSBURG, VA.—Bids are asked until Nov. 22 for furnishing and installing the equipment for a plant, as stated in our advertising columns. The plans and specifications are on file at the office of Engineering News, St Paul Building, New York. T. McCracken, Chn. Com.

CHARLESTON, S. C.—J. H. Dingle, Cy. Surv., writes us that the matter of an electric light plant, which the city proposes to build, is now in the courts, together with the water-works question.

MONTEZUMA, GA.—We are informed that the Montezuma & Oglethorpe Lighting Co. has its plant completed and will require nothing more, excepting general supplies.

KEY WEST, FLA.—It is stated that the plant of the Key West Gas & Electric Light Co. will be improved.

OCALA, FLA.—J. C. Norcross, Supt. electric light plant, writes us that the General Electric Co. has been awarded the contract for 2 MP. 4-pole 30-K-W. generators of 1,050 revolutions per minute, and slate panels, complete, making a total capacity for the plant of 1,200 16-c. p. incandescent lights.

ENSLEY, ALA.—Press reports state that contracts were let Nov. 1 for the erection of three electric lighting plants at Ensley. One to cost $30,000 will be used for lighting Ensley and Pratt City and the others for use at the new steel mill and by-products plants. The Ensley plant will be built by J. M. Meigham & Co. That for the steel mill will be built by the Excelsior Electric Co., Birmingham, Ala.

HENDERSON, TENN.—It is stated that a company is being organized to build a plant and an electric railway.

MEMPHIS, TENN.—Robt. Moran, Cy. Electrician, is reported by local papers as urging the city to have all electric wires, etc., placed in underground conduits. Mr. Moran recently returned from Northern cities where he secured considerable information.

WARSAW, KY.—The question of building a plant is reported as being considered.

BELLE CENTRE, O.—H. M. Cline, Mayor, writes us that the council at its last meeting passed an ordinance granting a 10-year franchise to the Belle Centre Electric Light & Power Co.

CHICAGO JUNCTION, O.—Louis Simmermacher, Clk., writes us that the following bids were received Oct. 25 for furnishing the materials and for putting in a plant:

Isaiah W. Newcomer, Lebanon, O*.	$976
Chas. F. Sturtevant, St. Louis, Mo.	11,215
G. P. Jacobs, Chicago Junction	11,150

*Semi-annual payments for a term of 15 years. The contract was let to Chas. F. Sturtevant.

DAYTON, O.—Henning & Henning, Attorneys, write us that an ordinance was introduced, Nov. 3, before the board of city affairs, asking for a franchise whereby great reductions will be made in the charge for city and private lighting. No definite action has as yet been taken in regard to securing plans, specifications, etc.

LOVELAND, O.—We are informed that nothing is likely to be done in regard to an electric light plant until the spring.

FAIRMOUNT, IND.—Gilbert Larue is securing estimates for a plant to include 40 enclosed arc lamps of 220 volts, etc., according to reports.

HUNTINGBURG, IND.—We are informed that it is proposed to have a company build a plant and lease it to the city for 6% or less on the cost of construction and $1,000 a year on the principle until paid. J. W. Schwartz, Mayor.

CHARLEVOIX, MICH.—This place voted Oct. 31 to issue $10,000 in bonds to purchase the plant of the Charlevoix Electric Co.

WYANDOTTE, MICH.—The council has decided to appeal the case of the Wyandotte Electric Light Co. vs. the City, which Judge Grove recently decided in favor of the plaintiffs, thus restraining the city from interfering with the company's extension of its wires. City Attorney Marr has been instructed to take immediate steps towards carrying it to the supreme court. Alderman Gorman has proposed that the city negotiate with the light company with a view to purchasing the plant. Mayor Gartner has appointed Aldermen Clark, Kiley and Gorman a committee.

CLINTON, ILL.—Bids are asked until about Dec. 1 for constructing a plant, according to reports. Harry Swigart has been granted a 20-year franchise, as noted last week. R. E. Rock has charge of the work.

EDWARDSVILLE, ILL.—Geo. D. Pogue, of the Edwardsville Electric Light & Power Co., writes us that the company wishes to correspond with manufacturers of electrical machinery for the plant to take the place of the one destroyed by fire Oct. 24, causing a loss of about $30,000. The plant will have a capacity for 60 2,000-c. p. arc and 3,000 16-c. p. incandescent lights.

GREEN BAY, WIS.—The plant of the Green Bay Gas & Electric Light Co., it is stated, will be extended at a cost of about $50,000. Sinclair Mainland, Mgr. and Purchasing Agent.

SUN PRAIRIE, WIS.—C. B. Hayden is said to have been granted a franchise for a plant.

ST. PAUL, MINN.—New specifications for lighting have been made whereby more competition may be secured. It is intended to offer a 10-year franchise and permission to do commercial business to the successful bidder. There will be 105 additional arc lights, making a total of 375 arc lights. The contract for lighting the city for one year will be let this month.

INDEPENDENCE, MO.—We are informed that the franchise for a plant for this place applied for by W. T. Felton, Kansas City, Mo., is still pending.

DENVER, COLO.—Aldermen Robt. M. Golder writes us that the aldermen have passed the ordinance granting a franchise to the Denver Power & Irrigation Co. The supervisors will act on the franchise this week; it will probably be passed. The plant will cost about $2,000,000. Address Rhodes Bros., 639 Equitable Bldg., Denver.

DENVER, COLO.—Bids are asked until Nov. 28 for installing an electric and heating plant, etc., for certain buildings at the county poor farm near Henderson. Jos. H. Smith, County Clk.

LEADVILLE, COLO.—We are informed that information in regard to the proposed power plant at Malta, noted last week, may be secured from J. G. White, Engr. and Contractor, 29 Broadway, New York. Thos. W. Jaycox, Leadville, is interested.

COVALLIS, ORE.—Bids were asked until Nov. 4 for furnishing and installing a plant for the state agricultural college at Covallis. E. M. Lazarus, 665 Worcester Block, Portland, Ore.; W. E. Yates, Secy.

PORTLAND, ORE.—Local papers state that surveys are being made for a power plant on the Sandy River. It is supposed that the promoters intend to transmit the power to Portland and Gresham. Judge J. E. Mayo, Portland, is said to be interested.

TILLAMOOK, ORE.—It is proposed to issue $15,000 in bonds for a plant and water-works, according to reports.

CLAREMONT, CAL.—C. G. Baldwin writes us that W. H. Sanders, Pomona, Cal., has made surveys for the proposed power plant at the head of Mill Creek, near Redlands, Cal. The company expects to spend between now and June $200,000 in hydraulic work and electrical installation. The company is not ready to ask for bids. The use will be for pumping water for irrigation and mines in San Jacinto, Lake View, etc.

HEALDSBURG, CAL.—Press reports state that the Healdsburg Electric Lighting Co. has applied to the superior court for an injunction against the city to prevent the sale of $80,000 of bonds for the purpose of constructing water-works and an electric light plant, contracts for which were recently let.

REDLANDS, CAL.—A report from San Bernardina states that the Redlands Electric Light & Power Co. has filed claim to 4,000 inches of water flowing above the surface and underground in Mill Creek, the point of diversion being Aker's Narrows. The water is to be used to develop power to generate electricity and compressed air, drive machinery, produce light and heat, operate all kinds of transportation facilities, and for other mechanical purposes. The power will be transmitted from a power house up Mill Creek canon to all the important towns and cities in Riverside, Los Angeles and San Bernardino counties. The water will be diverted by means of a tunnel 4 ft. wide and 6 ft. high, and a dam 300 ft. in width and 10 ft. high.

ALAMOGORDO, N. MEX.—J. A. Eddy, Alamogordo, N. Mex. and El Paso, Tex. (P. O.), writes us that the Alamogordo Lumber Co. will put in a plant to be operated by waste fuel from the mill. Address C. P. Henderson, Scranton, Pa.

GRANGEVILLE, IDAHO.—H. Orchard, of Portland, Ore., has been granted a franchise for a plant and water-works to cost about $30,000, according to reports.

COLVILLE, WASH.—Paul Laplant has applied for a franchise for a plant and water-works. The power will be secured from the dam on Mill Creek.

OTTAWA, ONT.—Bids are asked until Nov. 10 for furnishing about 4,000 electric light line poles for the proposed electric line for the Metropolitan Electric Co., recently incorporated. The poles are to be 30 to 35 ft. long and 7 ins. in diameter at the top. Jos. Robinson, Montreal, Que., and A. B. Broderick, Ottawa, are interested.

ORILLA, ONT.—We are informed that bids for constructing the proposed plant will be received about Dec. 1. There will be a 10,000-volt transmission plant, two 600-K-W. generators, S. U. and S. D. transformers, 1,000-HP. hydraulic plant. The plant will have a capacity for 50 2,000-c. p. arc and 1,200-c. p. incandescent lights; the power will be transmitted 18 miles; estimated cost of plant, $75,000. Roderick J. Parke, Elec. Engr., Toronto, Ont.

PEMBROKE, ONT.—Estimates for a municipal plant of 50 arc and 3,000 incandescent lights are being furnished by Roderick J. Parke, Toronto.

PRESCOTT, ONT.—We are informed that plans for a plant will be considered immediately after the construction of the proposed water-works and sewerage system which will cost about $100,000. John Galt, Engr., Canada Life Bldg., Toronto; J. B. White, Town Clk.

MONTREAL, QUE.—Wm. C. McDonald, Montreal, has given McGill University $30,000 with which to furnish a department of electrical engineering.

CASCADE CITY, B. C.—It is stated that the machinery for the plant of the Cascade Water Power & Light Co. will be put in next spring. Surveys, etc., are being made by Mr. Anderson.

NEW COMPANIES.—Grand Falls Water Power & Boom Co., Fredericton, N. B., Can.; $1,000,000; to build and operate a plant and mills at Grand Falls, N. B.; Redfield Proctor, U. S. Senator, Burlington, Vt.; Russell A. Alger, Secy. Army Dep't., Washington, D. C.; G. A. Hobart, Vice-Pres. U. S., Washington; Sir Wm. C. Van Horne, Pres. Canadian Pacific Ry. Co., Montreal, Que.; Lt. Hugh M. McLean, St. John, N. B.

Fort Smith Traction, Light & Power Co., Fort Smith, Ark.; $200,000; Pres., Samuel McLeod.

New Light Corporation, New York, N. Y.; to manufacture lighting machinery; $10,000; Frank M. Ashley, 97 Greene Ave., Brooklyn.

Bonham Electric Light & Power Co., Bonham, Tex.; $25,000; J. F. Heledge, J. B. Russell, J. N. Rainey, E. F. White.

Joplin Illuminating Co., Joplin, Mo.; $80,000; with three-fourths paid in; John C. Porter, Harrison J. Drummond, John J. Dunham, Francis Kuhn, Charles Nelson.

American Incandescent Lighting Co., Meriden, Conn.; $50,000; Thos. E. Webster, Bay City, Mich.; Lyman T. Lawton, Meriden; Robt. L. Doran, Nashville, Tenn.

BRIDGES.

CANAJOHARIE, N. Y.—Bids are asked until Nov. 15 for a lift bridge over the Erie Canal at Church St. Geo. W. Aldridge, Supt. Pub. Wks., Albany.

HOOSICK FALLS, N. Y.—Bids are asked by the town board until Nov. 13 for constructing the following bridges: 106-ft. span, 16-ft. roadway; 36-ft. span, 16-ft. roadway; 26-ft. span, 16-ft. roadway; 23-ft. span, 16-ft. roadway; two 18-ft. spans, 16-ft. roadway. Capacity of each bridge, 40 lbs. per sq. ft. D. M. Greene, Engr., Troy, N. Y.

HORNELLSVILLE, N. Y.—F. W. Dalrymple, Cy. Engr., has been instructed to advertise for bids for moving the present bridge on Canisteo St. to Van Scoter St., and for building a new bridge with 24-ft. roadway on Canisteo St.

SANDY HILL, N. Y.—It is reported that a new iron bridge will be constructed over the canal next winter. Meanwhile the street railway company will erect a temporary bridge east of the union hose house. Superintendent Kinmouth may be addressed.

BETHLEHEM, PA.—A hearing was to be given Nov. 9 by Jas. M. Porter, Easton, Pa.; J. B. Leith, Hellertown, Pa.; Alexander Singmaster, Macungie, Pa., and others who have been appointed viewers by the Northampton and Lehigh county commissioners to consider the question of constructing a bridge over the Lehigh River at Main St.

READING, PA.—A resolution has been passed by the council to have S. S. Hoff, Cy. Engr., prepare estimates for both a tunnel and an overhead bridge at Spring St. and a bridge at Pike St. and Philadelphia & Reading Ry.

WILLIAMSPORT, PA.—A petition has been presented to the county commissioners by Armstrong township for a bridge over Mosquito Creek, on the road from Duboistown to Nippenose valley. F. H. Keller, Edward Eldred and John Blair have been appointed viewers.

WILMINGTON, DEL.—The Baltimore & Ohio R. R. Co. will construct a bridge at Fourth and Hawley Sts., according to reports.

NORFOLK, VA.—The council has decided to offer the bridge company $8,000 for the bridge from the first ward to Brambleton and if the offer is not accepted bids will be asked for a new bridge from Mariner to Lovitt Ave.

SALEM, VA.—Walter Watson writes us that the following bids were received Oct. 22 for two bridges:

	80-ft. span.	60-ft. span.
Wrought Iron Bridge Co., Canton, O.	$1,010	$895
Champion Bridge Co., Wilmington, Del.	1,045	950
Massillon Bridge Co., Massillon, O.	1,070	921
Pittsburg Bridge Co., Pittsburg, Pa.	1,068	875
Youngstown Bridge Co., Youngstown, O.	1,025	855
Bellefontaine Br. & Iron Co., Bellefontaine, O	1,150	900
Geo. E. King Bridge Co., Des Moines, Ia.	1,074	967
Canton Bridge Co., Canton, O.	1,150	950
Toledo Bridge Co., Toledo, O.	1,000	850
King Bridge Co., Cleveland, O.	1,120	900
*Virginia Bridge Co., Richmond, Va.	1,000	775

*$1,740 for both bridges. Recommended for acceptance.

CLEVELAND, O.—Plans are being prepared by the park engineer for a proposed stone arch bridge, 60-ft. span, at the Wade Park Ave. crossing of the lower drive in Rockefeller Park.

LORAIN, O.—Bids are asked until Dec. 22 for furnishing the material and for constructing the superstructure for the Black River bridge, as stated in our advertising columns. Geo. H. Lewis, County Audr., Elyria, O.

ZANESVILLE, O.—Bids are asked until Dec. 8 for the material and for constructing the stone work for the west end approach of the Monroe St. bridge. Jas. L. Starkey, County Audr.

ELK RAPIDS, MICH.—The counties of Antrim and Kalkaska have decided to jointly construct a bridge over the Torch River, according to reports.

GRAND HAVEN, MICH.—F. F. McEachron, Dist. Clk., informs us that at the election Oct. 21 the county decided not to construct the proposed two bridges across the Grand River, to cost $10,000 each.

SAGINAW WEST SIDE, MICH.—The Flint & Pere Marquette R. R. Co. has applied to the county supervisors for permission to construct a bridge over the Tittabawassee River, in Saginaw township, according to reports.

MILWAUKEE, WIS.—The park board proposes to construct a viaduct 800 ft. long and 100 ft. wide, on the Highland Boulevard, over the Chicago, Milwaukee & St. Paul Ry.

MINNEAPOLIS, MINN.—L. A. Lydiard, Cy. Clk., informs us that this city was to vote on the question of constructing a new bridge over the Mississippi River, at 32d Ave., at the election Nov. 8.

LEXINGTON, MO.—We are informed that this place is desirous of awarding a contract for the construction of a high bridge or a low draw bridge over the Missouri River, to accommodate wagons and an electric railway, to cost about $50,000. The bridge proper will consist of three single-track fixed spans, each 420 ft. long. Frank Bowman, Secy. Com.

KANSAS CITY, MO.—The park board proposes to construct a stone arch bridge over the Kansas City Suburban Belt Ry., on the extension of Boston Boulevard, to be about 72 ft. long and 40 ft. wide.

WICHITA, KAN.—W. Q. Church, Gen. Mgr., Wichita Ry. Co., writes us that two pile bridges 200 ft. and 300 ft. long, respectively, are to be constructed over the Little Arkansas River.

SHERMAN, TEX.—Bids are asked for furnishing the material and for constructing a steel bridge over Post Oak Creek, on the Bloomer Road. J. H. Wood, County Judge; L. M. Tuck, County Clk.

LOS ANGELES, CAL.—Bids are asked until Nov. 21 for furnishing the material and constructing bridges on Ninth St., Feliz Road, Ave. 26 and Sixth St.; estimated cost, $23,000. C. H. Hance, Cy. Clk.

OAKLAND, CAL.—Bids will soon be asked by the county clerk for repairing the Alice St. bridge; estimated cost, $2,300.

VICTORIA, B. C.—Bids are asked until Nov. 30 for constructing a steel arch bridge at the gorge, Victoria Arm. W. S. Gore, Deputy Comr. of Lands and Wks.

BUILDINGS.

AUGUSTA, ME.—Bids are now being received for a steam heating plant for the Augusta House. Proprietor, H. E. Capen.

BOSTON, MASS.—Bids are asked by the school committee of this city until Nov. 14 for erecting a primary school building in Roxbury; also for furnishing and installing a heating and ventilating apparatus and a plumbing system. Arch., James Mulcahy, 60 State St., Boston.

WORCESTER, MASS.—J. T. Cahill has been awarded the contract for plumbing in the new 8-room school building on Millbury St., at $2,957; and N. J. Deady, for plumbing in the East Kendall St. school building, at $2,985. Other bidders were, O. S. Kendall & Son, F. J. Borden, A. A. McLoughlin and Maher & McGrath.

ALBANY, N. Y.—The trustees of the West Albany Y. M. C. A. have decided to erect a new $20,000 building on Watervliet Ave., near the West Albany Bridge, and has appointed a committee to secure plans and specifications.

AUBURN, N. Y.—The Lehigh Valley R. R. Co. has awarded the contract for the erection of a new passenger station in this city to A. F. Chapman & Co., 476 Ellicott Square, Buffalo, N. Y. The cost of this work, together with new railway shops at Sayre, Pa., will cost about $130,000.

BROOKLYN, N. Y.—Adiel S. Hall, of Brooklyn, was awarded the contract by the armory board, Nov. 4, for changes and improvements to the 22d Regiment Armory, at $4,600.——The state armory board, Nov. 2, awarded the contracts for a new rifle range and improvements to the drill hall of the 47th Armory in Brooklyn to John J. Gillis, of Brooklyn, at $23,065; for gallery seats, to Frank T. Barnes, of New York, at $1,650, and for steam heating plant, to Gaylord & Eltspence, of Binghamton, N. Y., at $11,700.

NEW YORK, N. Y.—Bids are asked by the fire department, 157 East 67th St., until Nov. 16, for erecting a building for the fire department on Maiden Lane, 60 ft. east of Pearl St., Borough of Manhattan; sureties, $15,000; also for constructing and erecting a building on East 12th St., west of University Place, Borough of Manhattan; sureties, $12,000.——Plans have been filed by Thos. J. McGuire, 968 St. Nicholas Ave., for a 7-story brick flat building on Central Park West, near 90th St., to cost $90,000. Arch., Henry S. Howell, 748 East 138th St.; by David Cohen, for four 4-story brick flat buildings at 147th St. and 3d Ave., to cost $86,000. Arch., R. Werner, 7 Teasdale Place; by C. L. La Grassa, 60 Liberty St., for a 7-story brick flat and store building, at 96th St. and the Boulevard, to cost $200,000. Arch., C. Steinmetz; by Peleg C. Smith, Newark, N. J., for ten 4-story brick tenement buildings on Prospect Ave., near 150th St., to cost $140,000. Arch., W. C. Dickerson, 149th St. and 3d Ave.; by William Call, 1133 Broadway, for a 6-story brick flat building on Central Park West, near 94th St., to cost $125,000. Archs., J. E. Ware & Son and H. S. S. Harde, 489 5th Ave.; by Judson Lawson, 898 West End Ave., for a 6-story brick flat building on 117th St., near Manhattan Ave., to cost $70,000. Arch., S. M. Holden; by Francis Crawford, for five 3-story brick dwellings on 118th St., near 7th Ave., to cost $80,000. Arch., A. H. Taylor, 20 West 34th St.

NEW YORK, N. Y.—Bids are asked until Nov. 25 for taking down and rebuilding the west end wall of the rear building of the U. S. Assay Office. Jas. Knox Taylor, Supervising Arch., Washington, D. C.

NEW YORK, N. Y.—Bids are asked by the supervising architect, Washington, D. C., until Nov. 28, for the mailing platform extension and shed for the post-office building in New York, as statcd in our advertising columns.

ENGLEWOOD, N. J.—The congregation of St. Paul's Episcopal Church of Englewood contemplates the erection of a new church building to cost about $35,000. Herbert B. Turner is interested.

NEWARK, N. J.—Bids are asked until Nov. 15 for the erection of a home for the aged and disabled firemen. Wm. H. Brown, Chn. of Com.; Ed. A. Wurth, Arch., 748 Broad St.

PHILADELPHIA, PA.—William Steele & Son, 506 Walnut St., have been granted a permit to erect a 7-story building, 48 × 161 ft., for J. & J. Dobson, at 809 and 811 Chestnut St., to cost about $60,000.

PHILADELPHIA, PA.—Charles McCaul, of this city, was awarded the contract Nov. 5 for the erection of the new mint building, at $441,743; time, 18 mos. Mount Desert granite will be used.

WILMINGTON, DEL.—Plans have been prepared, according to reports, for a 6-story office building to be erected at Market and 10th Sts., for Peter J. Ford, to cost $65,000. Arch., E. L. Rice, 508 Equitable Bldg.

BALTIMORE, MD.—An ordinance has been proposed to the city council appropriating $40,000 for the remodeling of the City Hall in order to secure more office space.

WASHINGTON, D. C.—The following proposals have been received by the commissioners for repairing and replacing the plumbing of the Jefferson school building: S. S. Shedd & Bro., $6,377.50; John J. Nolan, $5,200; Wm. Rothwell, $5,200; Ed. J. Hannan, $4,875.

LYNCHBURG, VA.—J. P. Pettyjohn & Co. were the lowest bidders Nov. 1 for erecting the new high school building (except heating), at $18,666. All bids were rejected.

NORFOLK, VA.—Bids have been rejected for the erection of new school buildings in this city, as they all exceeded the appropriation. It is said that $40,000 more will be appropriated, and plans changed accordingly.

FORT CASWELL, N. C.—Bids are asked until Dec. 7 for the construction of a torpedo storehouse at Fort Caswell, as advertised in Engineering News. Capt. W. E. Craighill, U. S. Engrs., Wilmington, N. C.

ABBEVILLE, GA.—Bids will soon be asked, according to reports, for erecting a $20,000 court house after plans by Andrew J. Bryan & Co., of Atlanta, Ga.

ATLANTA, GA.—The Nashville, Chattanooga & St. Louis Ry. Co., lessee of the Western & Atlantic Ry., and the other companies having lines running into this city, have combined to erect a new passenger station on the present site on Wall St., to cost between $200,000 and $400,000.——Plans have been prepared for a new club house to be built by the East Atlanta Land Co. for the East Atlanta Athletic Club, on Edgewood Ave. Archs., Blakely & Tyler, Fitten Bldg.

SAVANNAH, GA.—Bids are asked until Nov. 10 for the construction of hospital wards and other buildings necessary for a general hospital for 1,000 beds, at Savannah. Capt. John W. McIlarg, Asst. Q. M. of Vols.

FORT WAYNE, IND.—The trustees of the Indiana school for feeble minded youth has decided to ask for an appropriation of $100,000 to be used in building four cottages on the grounds and in building a large barn on the farm. The appropriation will be asked for in two portions.

CHICAGO, ILL.—A committee consisting of W. A. Giles, Sarah H. Stevenson and Horace Oakley, has been appointed to investigate the advisability of erecting public comfort stations in this city.——Contracts have been awarded by John Hulla, Jr., for a 4-story apartment building to be erected on Grand Boulevard, near 41st St., at a cost of about $30,000.——Permits have been granted to Stanley R. McCormick for two 7-story brick store buildings at 130 and 133 Michigan Ave., to cost $300,000, and for a 6-story brick store building at 136 Michigan Ave., to cost $100,000.——The following bids were received by the supervising architect, Washington, D. C., Nov. 3, for the construction (except heating apparatus) of the extension to the U. S. temporary post office at Chicago:

		Time
E. Earnshaw & Son, Chicago	$31,740	60 days
McEwen Bldg. & Mfg. Co., Chicago	32,400	2 mos.
W. E. Frost Mfg. Co., Chicago	26,596	75* dys
Garthwait, McCall & Co., Chicago	33 883	60 "
Wm. Mayor Co., Chicago	32,565	2 mos.
E. F. Gobel Co., Chicago	31,189	2 "
Congress Construction Co., Chicago	29,879	52* dys
Hennessee Bros. & Evans Co., Chicago	29,500	2 mos.
L. L. Leach & Son, Chicago	32,000	2 "
John C. Robinson, Chicago	31,500	2 "
W. H. & J. Mortimer, Chicago	33,478	2 "
Jonathan Clark & Sons, Chicago	32,390	60 days
Ledgewood & Campbell, Chicago	31,954	2 mos.
Greenbaum Construction Co., Chicago	27,973	2 "

*Working days.

CHICAGO, ILL.—The N. E. Frost Mfg. Co., of Chicago, was the lowest bidder Nov. 2, at $26,469, for constructing the temporary post-office building in Chicago; time, 75 working days. As the appropriation for the work was but $20,000, new bids will be called for.

FREEPORT, ILL.—The following bids were received Oct. 31 for erecting the superstructure of the proposed City Hall, using Portage stone; George H. Tandy, Cy. Clk.; D. S. Schureman, Arch., Rockford, Ill.: Smith & Thomas, Freeport, Ill., $33,600; W. J. McAlpine, Dixon Ill. (accepted), $28,380; Thos. J. Winchester, Rockford, Ill., $29,345.

LA HARPE, ILL.—Carl A. Anderson, of Burlington, Ia., has been awarded the contract for erecting a new school building in the city, at $12,300. The following bids for heating apparatus were received: Pittsburg Heating & Supply Co., $1,849; Law & Barber, Mendota, Ill. (accepted), $1,270; R. Ingraham & Co., La Harpe, $1,450; H. Ewinger, Burlington, Ia., $1,574.

ST. PAUL, MINN.—The contract for placing three smoke consumers on the Madison School building has been awarded to the Northwestern Automatic Smoke Preventer Co., represented by Ralph W. Cavanaugh, at $700.

DES MOINES, IA.—Plans are being prepared for a new 6-story brick, stone and terra cotta store and office building, 66 × 133 ft., to cost about $90,000. Archs., Foster, Liebbe & Co., 8th and Walnut Sts.

GARNER, IA.—Bids are asked until about Dec. 5 for the erection of a new court house. H. V. Reed, County Audr.; Arch., F. W. Kinney, Austin, Minn.

ST. LOUIS, MO.—Daniel Evans, contractor, has been granted a permit for the erection of a new armory building on Grand Ave., near Rutger St., to cost $45,000.——A new 10-story business building, 50 × 114 ft., is to be erected at 6th and Olive Sts., for the Reliance Realty Co., to cost about $200,000. Arch., Theodore C. Link.

SPRINGFIELD, MO.—Plans have been prepared for a hospital building to be erected here for the St. Louis & San Francisco Ry. Co., to cost about $35,000. Arch., Isaac C. Taylor, 900 Columbia Bldg., St. Louis, Mo.

CLEBURNE, TEX.—Bids are asked until Dec. 1 for erecting a new business building for Evans & Hoshour, of this city, to cost about $40,000. Arch., E. H. Silver, Dallas, Tex.

FORT BERTHOLD, N. DAK.—Bids are asked until Nov. 29 for the construction of a brick school building and a water system at the Fort Berthold Agency. W. A. Jones, Comr. of Indian Affairs, Washington, D. C.

PITKIN, COLO.—The store and bank building of R. R. Williams & Co., and many other business buildings, were destroyed by fire Nov. 7, causing a reported loss of $100,000.

SAN PEDRO, CAL.—W. A. Weldon, Chn. Bd. of Trustees, informs us that this city contemplates the erection of a new city hall building, and would like to receive plans for a suitable building. Bonds for the erection of a city hall and for water-works will probably be voted soon.

ST. THOMAS, ONT.—Bids are asked until Nov. 12 for plastering, plumbing, electric wiring, heating, etc., etc., required for the new municipal building. Alderman Sanders, Chn. Bldg. Com.; N. R. Darrach, Arch., Talbot St.

WATER-WORKS.

CHERRYFIELD, ME.—The board of trade is considering the question of building works, according to reports.

CHESTER, VT.—The Chester Water Co. has been incorporated.

ESSEX JUNCTION, VT.—The legislature is reported to have been petitioned to grant this place authority to issue $35,000 in bonds for the proposed works.

ST. JOHNSBURY, VT.—The question of securing an increased water supply is said to be under consideration.

BUFFALO, N. Y.—The Great Spring Water Co. has been incorporated with a capital stock of $10,000 by A. T. Mohr, Dr. F. P. Vandenbergh, Erie County Bank Bldg., Buffalo; J. M. Vandenbergh, John O. Adelt, J. F. Witmer, Cit Engr., 705 Ellicott Square, Buffalo; and W. J. Stanton, of Buffalo, and H. C. Vandenbergh, of New York city.

EASTHAMPTON (L. I.), N. Y.—A company has been organized to build works; capital stock, $25,000. Work will be begun at once, according to reports. Jos. S. Osborne, B. H. Van Sooy and J. T. Gardiner are interested. The works will consist of the following: Four and a-half miles of mains, a water tower 100 ft. × 12 ft., with a capacity of 85,000 gallons, to be built on a foundation of solid concrete, 20 ft. square by 9 ft. in height. Water will be secured from an artesian well 100 ft. in depth. The site chosen will be 35 ft. above the level of Main St. A gasoline engine of 15 HP. will run a triplex pump with the capacity of 8,000 gallons an hour. Twenty-six double nozzle hydrants are to be located 500 ft. apart.

EAST SYRACUSE, N. Y.—An election will be held Nov. 10 to vote on the question of issuing $3,500 in bonds for extending the works.

FISHKILL LANDING, N. Y.—Chas. A. Hague, 39 Cortlandt St., New York, is reported to have been engaged to make a survey for the proposed new works.

GREENPORT (L. I.), N. Y.—G. Corwin, Jr., Village Clk., writes us that the village is about to purchase the works of the Greenport City Water Co., built 10 years ago.

IRVINGTON-ON-THE-HUDSON, N. Y.—Bids are asked until Nov. 15 for furnishing the materials and labor for constructing the proposed reservoir, laying certain water pipe, etc. T. W. Crisfield, Clk. Bd. Trustees.

TROY, N. Y.—It is proposed to extend the mains to Albia so that borough may have a water supply. R. F. Hall, Water Comr.

CAMDEN, N. J.—The East Jersey Coast Water Co., 119 Market St., Camden, has been incorporated to construct water-works; capital stock, $100,000; incorporators, Geo. Reynolds, Ephraim Tomlinson, Peter V. Voorhees and John O. Wilson, of Camden county, New Jersey; H. Bayard Hodge, 1319 Filbert St., Philadelphia, Pa.; J. W. Hawley, Media, Pa.

IRVINGTON, N. J.—The committee has submitted a report on the proposed purchase of the works of the Irvington Water Co. The plant is valued at $49,690.

MILFORD, N. J.—J. W. Flad, Secy. and Treas. Spring Mills Water Co., writes us that the proposed works at Holland will have a reservoir of 1,500,000 gallons capacity, about 32,000 ft. of 10-in. pipe, 8,000 ft. of 3 to 6-in. service pipe, etc. The water will be secured from a spring yielding 50,000 gallons a day. L. A. Francisco, Engr., Easton, Pa.

VAILSBURG, N. J.—Eugene A. McMurray, 22 Clinton St., Newark, N. J., is preparing plans and specifications for supplying the borough with water in those streets which are not supplied by private companies. It is the intention of the borough to purchase the existing pipes and so form a supply throughout the entire borough under the control of the borough authorities. The supply is to come from the Commonwealth Water Co., of Summit.

WESTFIELD, N. J.—Press reports state as follows: A communication from the Westfield Water Co., E. C. Sergent, Pres., and W. S. Welch, Secy., has been presented to the Westfield township committee, asking that the voters of the township be given an opportunity to express their sentiments on the matter of the township owning its own water-works and stating in substance that if the voters were not in favor of town ownership the company would then construct works.

ALLENTOWN, PA.—Mayor Lewis has signed the ordinance providing for the purchase of the Schantz spring property for $14,000, to be used as a new water supply for the city. The property is located about four miles west of the city.

ALLEGHENY, PA.—The water committee is reported by local papers as favoring the purchase of a new pump for the Montrose works. A pump of 15,000,000 gallons a day and to cost about $60,000 will be needed. J. L. Brown, Supt. Bureau of Water.

GLENSIDE, PA.—The Glenside Water Co. has been incorporated with a capital stock of $1,000 by W. T. B. Roberts, Forrest H. Roberts, J. P. P. Brown, Chester E. Albright, Charles F. Mebus.

WASHINGTON, D. C.—Plans have been made, the land bought and work about to commence on a 15,000,000-gallon reservoir on the high ground between 16th St. extended and Rock Creek Park, west of the Brightwood Driving Park. It will serve the middle high section. Estimated cost, $150,000. W. A. McFarland, Supt. Water Dept.

BALTIMORE, MD.—A company has been organized to purchase the Mount Washington (P. O. Baltimore) works. A number of improvements will be made, according to reports. Capital stock, $25,000. Edward L. Garnard, Gen. Mgr.; Arnold E. Walters, Treas.

DENTON, MD.—Nicholas S. Hill, Jr., of the water department of Baltimore, has made surveys for works to cost about $12,000. A report states that bids will be asked in about three months. Howard Melone, Jos. Nichols and Wm. D. Uhler are on the committee.

ST. MICHAELS, MD.—The town commissioners are considering the question of works, according to reports.

NORFOLK, VA.—J. Thomas Peelle, Registrar, informs us that the following bids were received Oct. 26 for building the proposed addition to the works, as advertised in Engineering News: Sanford & Brooks Co., Baltimore, Md., $124,000, in 300 days; The Degnon-McLean Construction Co., New York, $127,840, in 5 months; $122,840, in 6 months, and $117,840, in 8 months; John Lavelle, Cleveland, O., $115,000, in 4 months; $110,000, in 5 months, and $105,240, in 7 months. John Lavelle declined to comply with his bid. The contract was awarded the Degnon-McLean Construction Co., 1 Broadway, New York, at $117,840, to be completed in eight months.

RICHLAND, GA.—Press reports state that this place has voted to sink an artesian well for a water supply. A company will probably be organized. Population, 500.

GREENWOOD, MISS.—J. L. Gillespie, Cy. Clk., writes us that everything for works and a sewerage system will be wanted, if it is decided to make the improvements. The water will be secured from artesian wells. Population, 2,500. H. G. Kitchell, Engr., Greenwood.

NEW IBERIA, LA.—A. J. Cammack, Secy. and Attorney, writes us that no election has been held to decide the question of building works and light plant. It is not known when the election will be held.

WEST TAMPA, FLA.—Bids are asked until Dec. 5 for furnishing the materials and for building the proposed works, as stated in our advertising columns. J. N. Hazlehurst, Engr., Tampa; M. E. Gillette, Chn. Com.

MEMPHIS, TENN.—Mayor Williams is reported by local papers to be in favor of the city's purchasing the works of the Artesian Water Co.

TULLAHOMA, TENN.—W. H. McLemore, Cy. Clk., writes us that the city will not be ready to ask for bids for works before next spring. Population, 2,500.

CLARINGTON, O.—An election will probably soon be held to vote on the question of issuing $10,000 in bonds for works.

CLEVELAND, O.—Bids are asked until Nov. 25 for furnishing four new cylinders and otherwise repairing and rebuilding Worthington pumping engine No. 4. Geo. R. Warden, Dir. Pub. Wks.

JONESVILLE, MICH.—Bids are asked until Nov. 15 for furnishing materials and for constructing works. There will be required 2,550 ft., 64 tons of 8-in. pipe; 2,600 ft., 45 tons, 6-in. pipe; 17,000 ft., 198 tons, of 4-in. pipe; 5 tons of special castings; three 8-in. valves, three 6-in. valves and sixteen 4-in. valves; 42 fire hydrants; two steam pumps, each with capacity to pump 750,000 gallons per 24 hours; two return tubular boilers, each 60 ins. in diameter and 16 ft. long, or boilers of any other type of equivalent capacity; furnishing all other materials, including tools and labor, and laying pipe and special castings, including the setting of valves and hydrants, pump foundations, boiler settings and connections; for pipe and fittings for connection of supply wells with pumps, and making connections; also for furnishing materials and for constructing one metallic stand-pipe, 16 ft. diameter and 80 ft. high, including foundations and appurtenances. J. D. Cook, Consult. Engr., 56 Law Bldg., Toledo, O.; Chas. F. Wade, Pres.; W. M. Wetmore, Clk.

ALTON, ILL.—The council is again considering the question of building municipal works, plans for which are to be made by R. L. Brown and Geo. C. Morgan, of the Seckner Contracting Co., Chicago, according to reports.

CASEY, ILL.—The question of issuing bonds for works is reported as being considered.

CICERO, ILL.—The Cicero Water, Gas & Electric Light Co. has let a contract to L. Wilson, 53 Dearborn St., Chicago, Ill., to drill an additional artesian well at the works at Oak Park. The well is to be 8 ins. at bottom and is to be 1,600 ft. deep.

ELKHART LAKE, WIS.—An election will be held Nov. 16 to vote on the question of issuing $5,000 on bonds for works.

ALBERT LEA, MINN.—Press reports state that the council water committee has decided to purchase a new 2,000,000-gallon pump, and is considering estimates from eastern concerns.

DULUTH, MINN.—The supreme court has handed down a decision against the city's issuing bonds to purchase the works for $1,250,000.

PELICAN RAPIDS, MINN.—The council is reported as considering estimates for works to cost about $8,000. An election to vote on the question will probably soon be held.

EAST GRAND FORKS, MINN.—The question of building works and a light plant is being considered.

INDEPENDENCE MO.—H. H. Pendleton, Cy. Engr., writes us that the Independence Water Works Co. was granted a 20-year extension to the franchise at the election Nov. 1. Extensions to the works will be made. R. D. Wirt, Supt.

MEXICO, MO.—Press reports state as follows: The fact was made public Oct. 27 that the bonds of the Mexico Water-Works Co. were recently purchased from New York parties by Samuel A. Locke and M. Butler Guthrie, of this city, who now own the works. The purchase price has not been made public, but it is supposed to be in the neighborhood of $400,000. John J. Steele, Supt. and Treas.

TEXARKANA, ARK.—R. A. Munson, Supt. Water Co. of Texarkana, writes us that no contracts will be let for improving the works; the work will be done by the company's own men.

McKINNEY, TEX.—Bids are asked until Nov. 30 for furnishing the materials and for building works to include the following: One frame pumping station, sheeted and roofed with corrugated iron; one reservoir or pump well 24 ft. in diameter and 12½ ft. deep; one double-acting deep well pump with an approximate capacity of 150,000 gallons in 24 hours and a lift of 450 ft.; one duplex compound high service pump with a capacity of one million gallons in 24 hours against a head of 160 ft.; one boiler plant of 2 tubular boilers 48 ins. in diameter and 16 ft. long, with fitting and all pipe connections, feed water pump and heater; one steel stand-pipe 20 ft. in diameter and 100 ft. high; 4,008 ft. of 12-in. cast-iron pipe with specials and valves; 704 ft. of 10-in. pipe; 3,240 ft. of 8-in. pipe; 11,880 ft. of 6-in. pipe, and 45 fire hydrants. J. M. Pearson, Mayor; W. B. Newsome, Jesse Shain, Water Comrs.

COLVILLE, WASH.—Paul Laplant proposes to build works in connection with the electric plant for which a franchise has been asked.

TILLAMOOK, ORE.—The question of the construction of municipal works and electric plant to cost about $15,000 is being considered.

FERNANDO, CAL.—The question of this place and Pocoima purchasing the works owned by J. P. Widney is being considered.

SAN PEDRO, CAL.—W. A. Weldon, Chn. Bd. Trustees, writes us that the city proposes in the near future to vote on the question of issuing bonds for works and a new city hall. The trustees were advertising Nov. 1 for a site for the works. Population, 2,000.

SONOMA, CAL.—The proposition to issue bonds for municipal works lacked four votes Oct. 24 of being carried. It is stated that another election will be held.

TEMPE, ARIZ.—Bids are asked by Geo. W. Hoadley, of Hoadley, Turnbull & Co., Phoenix, Ariz., for building a pumping plant of 100,000 gallons capacity. Payment will be in bonds.

GRANGEVILLE, IDAHO.—H. Orchard, Portland, Ore., is reported to have been granted a franchise for works and a light plant to cost about $30,000. There will be required six miles of mains.

HAMILTON, ONT.—E. G. Barrow, Engr., has submitted report, etc., on the proposed extension to the works to cost about $161,000 to $181,000. He has recommended that new distributing pipes be laid as soon as possible. About 31,000 ft. to 37,000 ft. of 20, 24 and 30-in. mains are recommended. Councilman Hannaford, Chn. Com.

STAYNER, ONT.—An election will be held in December to vote on the question of issuing $26,000 in bonds for works, according to reports. John Galt, Engr., Canada Life Bldg., Toronto, Ont.

OSHAWA, ONT.—Plans for works, a sewerage system and an electric plant are reported to have been prepared by John Galt, Canada Life Bldg., Toronto. Water will be secured from a spring about 13 miles distant. About 20 miles of mains and 100 hydrants will be needed. Estimated cost, $120,000.

PRESCOTT, ONT.—J. B. White, Town Clk., writes us that the proposed works and sewerage system will cost about $100,000. Bids will probably be asked some time during the winter. Permission to borrow $100,000 will have to be procured from the legislature. The water supply will be secured from the St. Lawrence River. John Galt, Engr., Canada Life Bldg., Toronto, Ont.; A. Whiting, I. W. Plumb and John Steel are on the committee.

SANDWICH, ONT.—This place will soon vote on the question of raising $1,500 for extending the water mains.

WATERLOO, ONT.—An election will be held Nov. 21 to vote on the question of issuing $50,000 in bonds for purchasing the works of the Waterloo Water Co. and also for improving the plant.

HAVANA, CUBA.—Bids are asked by the Quartermaster's Department, Army Bldg., Whitehall St., New York city, until Nov. 15 for furnishing for the new water-works at Havana, a 5¼ × 3½ × 5-ft. boiler feed pump, 3 duplex compound engines, 180,000 ft. of ¾ to 8-in. wrought and cast-iron water pipe, valves, faucets, bends, sleeves, tees, 14 cypress tanks, 20 tons soft lead, packing, etc. Goods to be delivered on board vessel at the wharf at Savannah, Brunswick, Ga.; Charleston, S. C.; Newport News, Va.; or New York.

VERA CRUZ, MEX.—Arrangements have been completed for works to cost about $600,000, to be paid for in 12 annual installments of $50,000 each. The water supply, it is said, will be taken from the Cotaxtla River.

LONDON, ENGLAND.—Reports state that the London county council last week decided by a large majority in favor of compulsory purchase of the works of all the London water companies, involving many millions of pounds sterling. Such a bill, however, will meet with great opposition in Parliament, where the vested interests are exceptionally strong.

COOLGARDIE, WEST AUSTRALIA.—English papers state that the government has decided to award the contracts for furnishing the pipe for the Coolgardie waterworks to G. & C. Hoskins, Sydney, New South Wales, and Mephan Fergusson, Melbourne and Perth. The two bids amount to about $5,450,000. There will be 61,852 lengths of 30-in. seamless pipe, each length 28 ft. long. A description of the proposed works was given in our issue of Feb. 10. C. Y. O'Connor, Engr.-in-Ch., Perth, Western Australia.

ST. PETERSBURG, RUSSIA.—A company is reported to have been organized to improve the works of this city and also to build a sewerage system; capital stock, $2,250,000.

IRRIGATION.

RIVERSIDE, CAL.—W. V. Covington has filed a claim to 600 ins. of water in the Whitewater and Snow Creek Junction, to be used for domestic, irrigation and mechanical purposes, according to reports.

SALT LAKE CITY, UTAH.—The council committee on irrigation is considering a proposition of the North Point Irrigation Co. to conduct the river water around White Lake, at a cost of about $5,000, or that the drain be extended to Salt Lake, which will cost about $30,000. E. W. Taylor, Arthur Parsons and T. J. Almy are interested.

McCAMMON, IDAHO.—A system to irrigate about 500,000 acres of land is about to be constructed by the Inter-State Canal & Power Co. George C. Parkinson, Pres., Preston, Idaho; Supt., Chester Call, Chesterfield, Idaho; Bishop E. G. Farmer, Treas., and James McMurris, Secy. A masonry dam will be constructed on the Bear River, south of Soda Springs, Idaho, to cost about $16,000. Surveys have been completed by John D. H. McAllister, Salt Lake City, Utah, for the canal which will tap the Bear River above the dam, and run about 11 miles in a northwesterly direction, covering about 20,000 acres.

NEW COMPANIES.—Consolidated Reservoir Co., Sheridan, Wyo.; $5,000; to construct the Martin reservoir to store water from Cross Creek in Big Horn county; W. E. Jackson, P. L. McKee, W. J. Croghan, F. M. Milligan and L. E. Martin.

Cedar-Mesa Ditch & Reservoir Co., Denver, Colo.; $1,000; to build ditches in Dela county and furnish power for irrigation, power, etc.; John W. Gallant, Daniel W. Hale, Harry E. Hale, Daniel S. Baldwin, and Harvey W. Stanley.

West Cache Irrigation Co., Trenton, Utah; $30,000; Myron W. Butler, Pres.; Charles G. Wood, Secy. and Treas.; Perley Merrill, George W. Adams, William Brigham and Joseph Wood.

Prenda Pumping Co., Riverside, Cal.; $50,000; to pump and deliver water for irrigation to the high lands above the Gage canal system. The water will be pumped from the canal by electrical power. W. G. Irving, Pres.; R. Henderson, Secy.; R. P. Winters and Robert M. Irving.

SEWERAGE.

BOSTON, MASS.—The North American Sewage Disposal Co. has been incorporated with a capital stock of $1,000,000 to build and operate sewage disposal plants and sewerage systems in cities of the United States. Perlie A. Dyar, Pres., Boston, Mass.; Henry W. Bowen, Treas., Roslindale, Mass.

MIDDLEBORO, MASS.—C. E. Grinnell and others have asked the state board of health to build a new system for this place.

SOUTHBRIDGE, MASS.—C. W. Hill, Clk. Com., writes us that plans for a system have been made, but no further action in regard to the matter has been taken.

BROOKLYN, N. Y.—The following bids were received Nov. 2 by the commissioner of sewers for building the 18th Ave. sewer for the Brooklyn Disciplinary Training School: John J. Cream, $4,591; Sigretto & Laurina, $4,585; James Jennings, $4,557; James Cacavajo & Co., $5,074; Mike Marrone, $8,635.

LIBERTY, N. Y.—Plans have been prepared for a system to cost about $32,000. A report states that other estimates make the system cost about $75,000.

NYACK, N. Y.—Bids are asked until 2 p. m., Nov. 10, for the purchase of $5,000 of 4% sewer bonds. J. M. Gesner, Village Treas.

SKANEATELES, N. Y.—Fred. Thomas, Civil Engr., is urging the board of trustees to build a system.

STAPLETON (S. I.), N. Y.—The question of issuing $238,000 in bonds for new sewers in this borough is being considered by the board of local improvements, Richmond Borough. Henry P. Morrison, Deputy Comr. of Sewers.

YORK, PA.—The York Sewer Co. has been incorporated with a capital stock of $1,000, by. D. F. Lafean, L. A. Marshall, and C. C. Frick.

HAGERSTOWN, MD.—The council is considering the question of building a system.

NASHVILLE, TENN.—The board of public works has asked for bids for building new sewers in Deluge and Grunby Sts.

HAMILTON, O.—Bids are asked until Nov. 25 for constructing storm sewers in three streets. L. A. Dillon, Cy. Engr.; M. O. Burns, Clk.

ELKHART, IND.—Bids are asked until Nov. 23 for constructing a sewer in Harrison St. D. F. Cordray, Cy. Engr.

CHICAGO, ILL.—Bids are asked until 11 a. m., Nov. 11, for the extension of section No. 2 of the intercepting sewers as follows: About 1,370 ft. of 5-ft. brick sewer in Sheridan Road, from Pratt Ave. to Lunt Ave.; 1,365 ft. of 4½-ft. brick sewer in Sheridan Road, from Lunt Ave. to Touhy Ave.; 1,270 ft. of 3¾-ft. brick sewer in Sheridan Road, from Touhy to Bryan Ave.; length, about 4,000 ft.; estimated cost, $30,000; and also for building other brick sewers. L. E. McGann, Comr. Pub. Wks.

JERSEYVILLE, ILL.—Bids are asked until Nov. 12 for constructing a 12-in. pipe sewer in a certain district. H. H. Snell, Chn. Com.

VENICE, ILL.—The councils of Venice and Madison have decided not to join with Granite City for a proposed joint sewerage system.

MADISON, WIS.—Bids are asked until 7.30 p. m., Nov. 11, for machinery, buildings, etc., in connection with the sewage disposal works, as follows: Two buildings, 1 30-HP. dynamo, 4 motors, 1 triplex pump, 2 centrifugal pumps, 1 sludge press, 1 chemical mixer and tank, 2 gasoline engines, water wheel connections and governor, 12,000 ft. copper wire for power circuit, lamps and wiring, poles, etc., etc. Plans and specifications may be seen at the engineer's office, Madison, Wis., and at the Builders' & Traders' Exchange, Milwaukee and Chicago, Ill. O. S. Norsman, Cy. Clk.; McClellan Dodge and John Nader, Engrs.

ST. CLOUD, MINN.—The proposed system for this place will cost about $23,000, according to reports.

COLUMBUS, NEB.—C. J. Garslow, Secy. and Treas. Columbus Sewer Co., writes us that the contracts for building three miles of 10, 8 and 6-in. pipe sewers have been let to Dussell & Sale and J. W. Fouble, of Columbus. Ernest Stenger, Engr., Omaha, Neb.

CARROLLTON, MO.—Alex. Trotter, Comr., writes us that nothing has yet been done in regard to securing a system except to vote to issue bonds, as noted last week. The bonds up to Nov. 1 had not been sold.

INDEPENDENCE, MO.—H. H. Pendleton, Cy. Engr., writes us that this city voted Nov. 1 to issue $75,000 in bonds for a system.

KANSAS CITY, MO.—The South Highlands Land & Improvement Co has been incorporated with a capital stock of about $150,000 to improve what is known as Roanoke Place. It comprises about 118 acres. Sewers will be put in next year, besides considerable pavement will be laid. Edward E. Holmes, Real Estate Agent, and Jas. Haggart are interested.

SHERMAN, TEX.—The Sherman Sewerage Co. has been incorporated in New Jersey with a capital stock of $250,000 to build a system in this city. Geo. W. Ruch, Pres., 2851 Hutchinson Ave., Philadelphia, Pa., may be addressed. E. M. Kearney, Cy. Secy.

SPOKANE, WASH.—Fife & Conlan and Peter Costello submitted the lowest bids Oct. 25 for building sewers in Lincoln St., Main Ave. and Peaceful Valley, at $5,695 and at $6,882, respectively.

GRASS VALLEY, CAL.—The board of trustees is being urged to take immediate steps towards a system.

NEVADA CITY, CAL.—Press reports state that the board of trustees is considering the question of engaging an engineer to prepare plans for a system.

MONTREAL, QUE.—City Surveyor St. George has submitted specifications for a sewage disposal plant on the Fraser property at the far end of St. Denis St.

OSHAWA, ONT.—John Galt, Toronto, has prepared plans for a system and water-works to cost about $120,000, according to reports. The question of issuing the necessary bonds will probably be voted upon in January.

PRESCOTT, ONT.—J. B. White, Town Clk., writes us that the proposed system and water-works will probably cost about $100,000. Bids will be asked about March. John Galt, Engr., Toronto, Ont.

NELSON, B. C.—The aldermen have decided to build sewers in several streets. Mayor Houston and Alderman Whalley may be addressed.

VERA CRUZ, MEX.—Press reports state that Pearsons & Sons will begin the construction of the proposed system as soon as the harbor works are completed.

MORECAMBE, LANCASTER, ENGLAND.—The question of building a sewerage system and a disposal plant for this district at a cost of about $300,000 is being considered. Col. W. Langton Coke, Local District Council Board Inspector, may be addressed.

ST. PETERSBURG, RUSSIA.—Press reports state that a company has been organized to build a system and for improving the water-works of this city. Capital stock, $2,250,000.

GARBAGE DISPOSAL—STREET CLEANING

NEW ROCHELLE, N. Y.—Frederick Lorenzen, 145 Franklin Ave., writes us that there is no present expectation of building a garbage crematory. This place is under a village government with a special charter and has little or no power to raise money except by vote of the taxpayers, and a favorable vote probably cannot be secured at this time. The thickly settled part of the village is in need of a crematory but the outside taxpayers will vote the proposition down. New Rochelle has 14,000 to 15,000 inhabitants and tried to get a city charter last winter. The bill passed both houses of the legislature, but Gov. Black did not sign it. The people will make another effort this year and will probably succeed. If the city government is established one of the first things to be done is to be the building of a garbage crematory.

JERSEY CITY, N. J.—Bids will be asked by the street and water board until about Dec. 1 for collecting the ashes and garbage for one year.

CLEVELAND, O.—Bids are asked until Nov. 25 for cleaning the paved streets for the year ending Dec. 31, 1899. Geo. R. Warden, Dir. Pub. Wks.

CHICAGO, ILL.—A statement indicating that $365,526 had been expended in disposing of the city's garbage during the present year up to Oct. 1 has been submitted to Mayor Harrison. The report is to be considered in connection with the adoption of a new plan for removing garbage and ashes. The total appropriation for the year was $417,060. The unexpended balance on hand Oct. 1 was $51,534.30, and Superintendent of Streets M. F. Doherty says this sum is sufficient to continue the present service until January. It was decided Nov. 1 not to have the city build plants, but to ask for bids for collecting and

disposing of the garbage according to the specifications of the five-year contract. Propositions from various companies are being considered.

WASHINGTON, D. C.—Dr. Wm. C. Woodward, Health Officer, has recommended that bids be asked not later than December, 1899, for collecting and removing the garbage, etc. The present contract expires June 30, 1900.

ST. JOSEPH, MO.—The health department is considering methods and estimates of various garbage disposal plants.

ALAMEDA, CAL.—The question of a municipal crematory is being considered.

STREETS AND ROADS.

BUFFALO, N. Y.—A resolution has been passed by the council to pave Glenwood Ave., from Main to Purdy St. ——The board of park commissioners has decided to construct a new drive on Humboldt Parkway, between Kensington and Delaware Aves.; also to issue $5,000 in bonds for the work.——A contract has been awarded to Henry C. Burgard, at $13,750, for surfacing Cherry St., between Michigan and Virginia Sts., with Alcatraz asphalt. A. H. Beyer, Chn. St. Com.

NIAGARA FALLS, N. Y.—Reports state that Henry C. Burgard, Buffalo, has been awarded a contract to lay asphalt pavements on Second and Cherry Sts., at $15,025.

PORT CHESTER, N. Y.—The highway commissioners have asked for an appropriation of $25,950 for the maintenance of the town roads.

MAY'S LANDING, N. J.—A petition was presented to the board of freeholders Nov. 2 for a road from Pleasantville to May's Landing; also for the completion of the Longport Drive through Great Egg Harbor township.

NEW PROVIDENCE, N. J.—A petition has been presented to the board of freeholders, Elizabeth, N. J., for the extension of South St. to the county line, a distance of three miles; estimated cost for macadam, about $7,750.

PLAINFIELD, N. J.—Bids are asked until Nov. 21 for furnishing the material and for macadamizing on East 9th St., East 6th St., and Franklin Place. Jas. T. MacMurray, Cy. Clk.

VAILSBURG, N. J.—Eugene A. McMurray, Borough Engr., informs us that the borough is about to close the contract for laying about 40,000 sq. ft. of cement sidewalk, with W. H. Farrell, 122 Clinton St., Newark, N. J.

PHILADELPHIA, PA.—The Fairmount Park committee has recommended the ordinance to macadamize Lincoln Ave. at a cost of $25,000.

SCRANTON, PA.—A contract was awarded Nov. 3 to the Alcatraz Co., New York, for paving Hyde Park Ave., from Lafayette to Division St.

SHARPSBURG, PA.—Booth & Flinn, Ltd., were awarded a contract Nov. 1, at $60,000, for asphalt and brick paving. The work will probably not be commenced before spring. T. R. Higgins, Clk.

SHIPPENSBURG, PA.—G. W. Wilt, Ch. Burgess, informs us that the question of issuing $10,000 in bonds for paving was to be voted upon Nov. 8. A contract for the work, if authorized, will not be let until spring.

BERKLEY, VA.—Bids are asked until Nov. 14 for curbing, guttering and macadamizing on Berkley Ave. A. H. Martin, Chn. Improvement Bd.

NORFOLK, VA.—W. T. Brooke, Cy. Engr., writes us that nothing has been done in connection with the paving of Brambleton and Park Aves. A vote will be taken at the election this fall to decide whether bonds shall be issued for the work.

PETERSBURG, VA.—N. T. Patterson, Jr., Pres. Council, writes that at the meeting of the council Nov. 1 the committee on streets asked authority to employ an expert to determine the best material to be used in paving Sycamore and other streets. At a conference of the finance and street committee it was agreed to recommend to the council that $50,000 be expended, and perhaps more, in the improvements of streets.

NEW ORLEANS, LA.—Plans will be prepared by A. C. Bell, Cy. Engr., for the paving of about 30 streets; estimated cost, about $300,000.

BRIDGEPORT, O.—John A. Fawcett, Clk., informs us that at the election Nov. 8 the question of issuing $75,000 in bonds for street improvements was to be voted upon.

FINDLAY, O.—Bids are asked until Nov. 10 for constructing sidewalks on North Main and three other streets. A. W. Ray, Cy. Clk.

NORWOOD, O.—Bids are asked until Nov. 21 for the purchase of $3,791 of 6% street improvement bonds. W. C. Wichgar, Clk.

SPRINGFIELD, O.—The board of public affairs has passed a resolution to improve Sherman Ave., from Harrison St., east.

CARTHAGE, ILL.—Reports state that the council has passed an ordinance to pave on North Main St.; estimated cost, $3,592.

WILMETTE, ILL.—Bids are asked until 7:30 p. m., Nov. 11, for grading, curbing and paving on Gregory Ave. Louis J. Pierson, Bd. Local Improvements.

WILWAUKEE, WIS.—The park board has resolved to extend the Highland Boulevard from 35th St. to the south entrance of West Park, to be 100 ft. wide. It is also planned to build a drive south from Highland Boulevard on Washington Ave. or 27th St., to the valley and across a viaduct to the south side.

CARROLLTON, MO.—Alex. Trotter, Chn. Com., informs us that the city is ready to let contracts and to employ an engineer for the proposed paving and sewers, for which $50,000 in bonds has recently been authorized.

BEAUMONT, TEX.—R. E. Kelley, Alderman, writes us that L. E. Beadle, Beaumont, is preparing plans for paving. Bids will be asked in about a month.

DALLAS, TEX.—Bids are asked until Nov. 14, for about 11,400 sq. yds. of asphalt and brick paving. I. A. Moore, Cy. Secy.

DALLAS, TEXAS.—The question of paving Main and Elm Sts. between San Jacinto St. and Washington Ave. is being considered. John H. Traylor, Mayor.

LOS ANGELES, CAL.—Bids are asked until Nov. 17 for furnishing 2,347 cu. yds. of gravel on Vernon Ave. T. E. Newlin, County Clk.

SACRAMENTO, CAL.—Plans will be prepared by J. C. Boyd, County Surv., for the macadamizing of Magnolia Ave.

TORONTO, ONT.—It is reported that the board of control has awarded the following contracts for paving: Dominion Paving & Construction Co., King St., brick paving, $6,183; Euclid Ave., cedar block, $3,107; Queen St., brick, $7,363; Construction & Paving Co., Sorauren Ave., brick, $9,018; W. F. Grant & Co., Queen St., Scoria Block, $5,432.

MANUFACTURING PLANTS.

BERLIN, N. H.—A. N. Gilbert has been awarded the contract for the construction of a bleachery, 110 × 65 ft., for the Burgess Sulphite Fiber Co.

BOSTON, MASS.—The factory building of the Trimount Mfg. Co., on Armory Ave., Roxbury, was burned, Nov. 5, damaging much machinery; reported loss, $15,000.

WINSTED, CONN.—Reports state that the M. E. Moore Bronze & Silverware Co., of New York, has decided to remove its entire plant to Winsted, near Ansonia.

GLEN COVE (L. I.), N. Y.—A fire in the National Starch Mfg. Co.'s plant, Nov. 3, caused damage estimated at $175,000.

GLOUCESTER CITY, N. J.—The Gloucester Mfg. Co. is said to be about to erect large additions to its present plant on adjoining land.

ALLENTOWN, PA.—James Nagle & Son, of Allentown, are reported to have been awarded the contract for erecting a new silk mill in this city.

BEAVER FALLS, PA.—Ground has been broken for the foundation of the large building to be erected on 3d St. for the Union Drawn Steel Co., but the contract for the building has not yet been let.

ELLWOOD, PA.—It is announced that the American Lamp & Brass Co., of Trenton, N. J., is to establish a new factory at Ellwood, at once, near the present plant of the Ellwood Tin-Plate Co.

JOHNSTOWN, PA.—It is reported that the American Specialty Enameling Co. has closed an agreement whereby it will erect a hollow-ware and enameling plant at this place.

SAYRE, PA.—A. F. Chapman & Co., 476 Ellicott Square, Buffalo, N. Y., have been awarded a contract by the Lehigh Valley R. R. Co. for the construction of new railway shops at Sayre, consisting of a cabinet shop, 75 × 200 ft.; a blacksmith shop, 75 × 200 ft., and a paint shop, 224 × 240 ft. The buildings will be of brick and stone, with iron truss roofs, with improved saw-tooth roofing on the paint shop. These contractors have also been awarded tht contract for erecting a new passenger station at Auburn, N. Y., the total cost of all the work being about $130,000.

WILKESBARRE, PA.—A new dye house, 24 × 30 ft., will soon be built for the Lee Park knitting mills. Pres., W. P. Morgan.

RICHMOND, VA.—Henry L. Valentine and others contemplate the purchase of the Haxhall mills, at a cost of $135,000, for the purpose of establishing a large paper and pulp mills.

PARKERSBURG, W. VA.—Reports state that the Oil Well Supply Co., of Pittsburg, will erect a large plant in this city for the manufacture of oil rigs and reels.

ATLANTA, GA.—Matthew and Thomas W. Prior, of Philadelphia, Pa., and others are said to contemplate the erection of a new cotton gin factory in Atlanta. W. T. Forbes, of Atlanta, is interested.

HARMONY GROVE, GA.—The erection of a new cotton mill is being contemplated by G. W. D. Harber, of Harmony Grove.

ENSLEY, ALA.—P. G. Shook, Secy. of the Alabama Steel & Shipbuilding Co., of Ensley, informs us that contracts have not yet been let for erecting the company's new plant at this place, nor has the time yet been determined when bids will be received.——Press reports state that the Alabama Steel & Wire Co. has let the contract for erecting a wire, rod and wire nail mill, with a daily capacity of 600 tons, at Ensley, to the Garrett Engineering Co. Secy., G. H. Schuler, Cleveland, O.

AKRON, O.—It is reported that the Franz Body Mfg. Co., now at Berlin, O., will remove its plant to this city. The company has just been incorporated with a capital stock of $60,000, for the manufacture of vehicle bodies.

CLEVELAND, O.—The works of the Standard Wheel Co., at 44 Bessemer Ave., were burned, Nov. 5, causing an estimated loss of $80,000.

TOLEDO, O.—Henry Speiker has been awarded the contract for erecting the Toledo Lamp Chimney Co.'s works on Detroit Ave; the building will cost about $20,000, and the machinery about $50,000.——W. H. Stewart, of Cincinnati, O., expects to erect a new building for the use of the Maumee Brewing Co. Architect Wachter may be addressed.

LAPEER, MICH.—The lumber and shingle mill of Robert King was destroyed by fire, Nov. 2, causing a reported loss of $50,000.

CHICAGO, ILL.—Contracts are said to have been let for erecting a brick, stone and iron brewery for Virgil M. Brand, at Elston Ave. and Snow St., to cost, complete, about $150,000. Arch., Louis Lehle.

SACRAMENTO, CAL.—A fire in the extensive railway shops of the Southern Pacific Ry. Co., damaged property valued at $200,000.

PORT ANGELES, WASH.—It is reported that Homer H Swaney and others, of McKeesport, Pa., will build a new steel plant at this place, to employ about 100 hands. Work is expected to begin on the construction on Jan. 1.

SHANGHAI, CHINA.—Reports state that the Shanghai Ice, Cold Storage & Refrigerating Co., Ltd., of Shanghai, is said to be making preparations to purchase an ice-making plant of the latest and best design. American manufacturers will have an opportunity to compete. The company is capitalized at $65,000.

GAS PLANTS.

MILWAUKEE, WIS.—Bids are asked until 2 p. m., Nov. 10, for furnishing and installing gas and electric light fixtures in the U. S. building. O. L. Spaulding, Acting Secy., Treasury Dept., Washington, D. C.

NEW COMPANIES.—Clinton Gas Co., Prudential Bldg., Newark, N. J.; $100,000, with $1,000 paid in; to manufacture, sell and distribute illuminating and fuel gas throughout Essex and part of Hudson counties; Edward H. Wright, Jr., Edward J. Whitney, Nellie B. Crawford, Prudential Bldg., Newark, N. J.

Polk Creek Oil, Gas & Fuel Co., Weston, W. Va.; $50,000, with $16 paid in; to operate for oil and gas; S. E. Barrett, Andrew Edmiston, F. G. Orr, W. B. McGary, E. G. Davesson, Weston, W. Va.

MISCELLANEOUS CONTRACTS.

ELECTRIC FANS.—Dothen, Ala.—J. W. Jones asks for the address of manufacturers of electric fans.

WHARF.—Washington, D. C.—Bids are asked until Nov. 19 for constructing a wooden wharf at the naval magazine. Chas. O'Neil, Ch. Bureau Ordinance.

BOILERS.—Brooklyn, N. Y.—Bids are asked until Nov. 26 for furnishing boilers for the navy yard. M. T. Endicott, Ch. Bureau Yards and Docks, Washington, D. C.

BOILERS.—Boston, Mass.—Bids are asked until Nov. 26 for furnishing boilers at the navy yard. M. T. Endicott, Ch. Bureau Yards and Docks, Washington, D. C.

WHARF.—Bruce Mines, Ont.—The provincial government has appropriated $6,000 for the construction of a wharf at Marks St. R. E. Miller, Reeve, may be addressed.

TUG BOAT.—San Francisco, Cal.—Bids are asked until Nov. 28 for furnishing one tug boat. Lt.-Col. Oscar F. Long, U. S. Q.-M., 36 New Montgomery St., San Francisco.

TELEPHONE SYSTEM.—Paducah, Ky.—A franchise was granted Oct. 25 to the American Electric Telephone Co. The company has already secured over 400 subscribers.

CONDENSER TUBES.—Mare Island, Cal.—Bids are asked until Nov. 29 for furnishing condenser tubes for the navy yard. Edwin Stewart, Paymaster-Gen., Washington, D. C.

NAVAL SUPPLIES.—Washington, D. C.—Bids are asked until Nov. 15 for furnishing at the navy yard brass wire, block tin, slab zinc, pig iron, steel drill rods, etc. Edwin Stewart, Paymaster-Gen.

PARK WORK.—Cleveland, O.—Bids are asked until Nov. 16 for grading, draining, etc., of Edgewater Park, and for furnishing the materials. C. W. Pratt, Jr., Ch. Engr., Bd. Park Comrs., 185 Euclid Ave.

WHARF.—Toronto, Ont.—It has been decided to construct a wharf between Lorne and York Sts., with a frontage of 315 ft. and 500 ft. deep; estimated cost, $39,000. Address Alderman Sheppard.

SEAWALL.—Staten Island, N. Y.—Bids are asked until Dec. 1 for constructing a sea wall at the U. S. light-house depot, as stated in our advertising columns. Lt.-Col. D. P. Heap, U. S. Engr., Tompkinsville, S. I.

CRANE.—Brooklyn, N. Y.—Bids are asked until Dec. 10 for furnishing a crane of 100 tons capacity for the navy yard; appropriation, $100,000. M. T. Endicott, Ch. Bureau of Yards and Docks, Washington, D. C.

EXTENDING CANAL.—New Orleans, La.—Bids are asked until noon, Nov. 10, for cleaning and extending the Claiborne Canal, between Elysian Fields St. and Jourdon Ave. F. G. Freret, Secy. Drainage Comn., City Hall.

ENGINE AND BOILERS.—Fairmount, Ind.—Reports state that Gilbert Larue wishes to purchase one 14 × 16-ft. automatic engine and two 54 × 64-in. horizontal tubular boilers, with pipe fittings, duplex boiler feed pump, etc.

WHARF AND ROADWAY.—San Francisco, Cal.—Reports state that bids will soon be asked by the navy department, Washington, D. C., for constructing a wharf 200 ft. long and a 1,200-ft. roadway; estimated cost, $6,500.

DAMS.—Sacramento, Cal.—The commission of public works has in contemplation the construction of about 35 wing dams in regard to shoaling the Sacramento side of the river. Nothing will probably be done until next summer.

REMOVING WRECK.—Philadelphia, Pa.—Bids are asked until Dec. 5 for removing the wreck of the schooner "Joseph R. Ellis," in the Delaware River, near Tinicum Island. Lt.-Col. C. W. Raymond, U. S. Engr., 1428 Arch St., Philadelphia.

STEAMER AND FREIGHT SHEDS BURNED.—Collingswood, Ont.—The steamer "Pacific," owned by the Great Northern Transit Co., and the Grand Trunk wharves were burned Nov. 3. The steamer was valued at $85,000; insurance, $25,000.

CONDUIT SYSTEM.—Erie, Pa.—Bids are asked by the council until 5 p. m., Nov. 10, for the extension and equipment of the fire alarm, telegraph and police patrol conduit systems; appropriation, $2,500.——The bids opened Oct. 27 for electric conduits are given under Contract Prices.

CANAL.—Tampico, Ill.—Bids are asked until Dec. 6 for constructing about eight miles of feeder canal of the Illinois & Mississippi Canal, near Tampico, as stated in our advertising columns. Address Maj. W. L. Marshall, U. S. Engr., 1637 Indiana Ave., Chicago, or Asst. Engr. L. L. Wheeler, Sterling Ill.

SCALES, ETC.—Washington, D. C.—Bids are asked until Nov. 29 for furnishing for use of the Customs Service, during the period of one year from Jan. 1, 1899, such scales, beams, weights and other weighing apparatus and repairs of the same, as may be required, and to be delivered free of all charges for freight. O. L. Spaulding, Acting Secy., Treasury Dept., Washington.

TUNNEL.—London, England.—Bids are asked by the London county council until Jan. 24 for constructing a tunnel for pedestrian traffic under the River Thames, between the Poplar and Greenwich sides of the river. There will be a vertical shaft and staircase at each end of the tunnel. Plans and specifications may be secured, upon depositing $50, from the engineer's department, County Hall, Spring Gardens, S. W., London.

FIRE APPARATUS.—New York, N. Y.—Bids are asked until Nov. 16 for furnishing one double-extra first size steam fire engine, with La France pump and boilers; surety, $2,500; two double-extra first size steam fire engines, with Fox sectional water tube boilers; surety, $4,500; four first size hose wagons; surety, $1,200; 40 fire alarm boxes and 52 keyless doors for fire alarm boxes. John J. Scannell, Fire Comr., 157 East 67th St.

TRAVELING CRANE.—Norfolk, Va.—Reports state that the following bids were received Oct. 29 for furnishing a traveling crane at the navy yard: Morgan Engineering Co., Alliance, O., $14,952; William Sellers & Co., 1600 Hamilton St., Philadelphia, Pa., $11,980; Henry S. Manning, 111 Liberty St., New York, $14,221; The Wellman-Beaver Engineering Co., 1404 New England Bldg., Cleveland, O., $19,760.

FIRE ALARM SYSTEM CUT-OUTS.—Rochester, N. Y.—Local papers state that Louis W. Miller, of the Rochester Electrical Mfg. Co., which manufactures the Miller patent cut-out for protection of fire alarm and police telegraph boxes, has made a contract to equip the fire alarm and police systems of Brooklyn, N. Y., and Paterson, N. J., with the patent cut-out. There are 1,200 fire alarm boxes and 900 police boxes in Brooklyn. Rochester is the only city at present where fire alarm and police boxes are protected.

PUMPING.—San Francisco, Cal.—The executive committee of the Comstock Pumping Association has let the contract for draining the water 500 ft. below its present level (20 ft. below the Sutro Tunnel sill floor), which is as far as the present available power from water pressure for running the pumping machinery will permit, to the Risdon Iron & Locomotive Works, of San Francisco, at $30,000, payable in installments, and work guaranteed. Work will begin in a few days. The pumps are to handle about 13,000 gallons of water a minute.

TELEGRAPH LINES, ETC.—Tokyo, Japan.—We are informed that Saitaro Oi, of the Ministry of Communications, is visiting the United States to secure information in regard to telegraph lines, underground electric conduits, etc. The traffic throughout the islands has so greatly increased in the last few years that it has become necessary to extend the telegraph lines. The government will spend in all about $20,000,000 for this purpose. There are now in the country 50,000 miles of telephone lines, and many miles more are under construction. Mr. Oi will be in the United

States about a month, after which he will visit Europe, and will return to Japan by way of New York. His address while in the United States is care of S. Kondo, Pres. Japan-American Commercial & Industrial Association, Times Bldg., New York.

METAL WORK.—Mobile, Ala.—Lt.-Col. A. N. Damrell, U. S. Lighthouse Engr., Mobile, informs us that the following bids were received Oct. 31 for furnishing the metal work for six iron spindle day beacons for the Florida Reefs, Fla., advertised in Engineering News, Oct. 20:

Allentown Rolling Mills, Allentown, Pa.	$2,328
Jonson & Co., Brooklyn, N. Y.	2,248
Tacony Iron & Metal Co., Tacony, Philadelphia, Pa.	2,190
Atlanta Machine Works, Atlanta, Ga.	1,695
Chamblin & Scott, Richmond, Va.	2,484
Emil Severin, Aurora, Ind.	1,799
John P. McGuire, Cleveland, O	2,250

CONTRACT PRICES.

JETTIES.—Yaquina Bay, Ore.—Maj. W. L. Fisk, U. S. Engr., Portland, Ore., received the following bids Oct. 25 for extending jetties at Yaquina Bay, Ore., as advertised in Engineering News; the short ton is used for the two classes of stone and the rock removal, and the long ton for the rails used:

CEMENT, STONE AND SAND.—Fort Greble, R. I.—The following bids were received by Maj. D. W. Lockwood, U. S. Engr., Newport, R. I., Oct. 28, 1898, for furnishing cement, stone and sand for the construction of mortar battery at Fort Greble, R. I., as advertised in Engineering News; (1) being for Rosendale cement, (2) for broken stone, (3) for sand, (4) for Portland cement: S. & E. S. Belden, Hartford, Conn.—(2) $1.47 and $1.62 a cu. yd., delivered alongside wharf and on carts, respectively; Lawrence Cement Co., New York—(1) 68 cts. a bbl., on carts; Calvin Tomkins, New York—(2) $1.30¾ and $1.50¾, alongside wharf and on carts, respectively; Atlas Cement Co., New York—(4) $2.15 a bbl. on carts; Newark & Rosendale Lime & Cement Co., New York—(1) 78½ cts.; J. K. Sullivan, Newport, R. I.—(3) 90 cts. and $1.35 a cu. yd. on carts and at site, respectively; E. K. Chamberlin, New York—(2) $1.70 a cu. yd., on carts, and $1.80 a yd. at site; (4) $2.10 a bbl. on carts and $2.20 at site; Newark & Rosendale L. & C. Co.—(1) 70 cts. a bbl. (Brooklyn Bridge brand).

DREDGING.—Oakland, Cal.—O. P. Johnson submitted the lowest bid Oct. 17, 1898, to the board of public works for 550,000 cu. yds. of dredging in Lake Merritt, at 6.93 cts. a cu. yd., if allowed to furnish his own dumping place; total, about $38,000. The other bids were as follows: San Francisco Bridge Co., 9.87 cts. a cu. yd., if allowed to furnish own dumping ground; dredging to be finished June 30; if work is to be finished within one year from date of contract, 14.39 cts. for first 275,000 cu. yds., and 7.87 cts. for rest; no bid submitted under specification of city to furnish dumping place. Quimby & Harrelson, 9.09 cts. a cu. yd. city to furnish dumping ground, and work to be completed by June 30; bidders stipulated dump should be within a ½-mile of lake, the money for work to be appropriated in tax levy and levees and bulkheads about dumping place built to their satisfaction. Pacific Coast Dredging & Reclamation Co., 9 cts. a cu. yd. if city furnish dumping place; 11 cts. if contractor furnish place; also stipulated that city should build bulkhead at 8th St. if decided to pump mud between 12th and 8th Sts. O. P. Johnson, 10.09 cts. a cu. yd. if city furnish dumping place and work to be completed by June 30; or, 10.55 cts. if not to be finished in a year from sign ng contract; if contractor furnished dumping place, 6.93 cts. a cu. yd. if finished by June 30, or 7.39 cts. if finished year from signing of contract.

Bids Received at Portland, Ore., Oct. 25, 1898, for Jetties at Yaquina Bay, Ore.

Quantities.		Christie, Lowe & Heyworth, Chicago, Ill.	Wakefield & Jacobsen, Portland, Ore.	John Kiernan, Portland, Ore.	Daniel Kern, Portland, Ore.	Albany Contract Co., Albany, Ore.	W. L. Prather, Jr., Oakland, Cal.	Campbell & Buckman, San Francisco, Cal.	Columbia Bridge Co., Portland, Ore.
Lumber	814,000 ft. B.M.	$15.00	$14.00	$20.00	$14.00	$22.00	$12.00	$14.00	$16 00
Piles	12,000 lin. ft..	.15	.14	.30	.17	.25	.15	.15	.23
Stone: Class A	570,000 tons....	.68	.78	.81½	.82	.82	.79	.90	1.25
Class B	60,000 " ...	1.30	1.75	1.25	1.75	1.90	3.49	2.10	1.48
Rails: New	.68 " ...	50.00	40.00	50.00	45.00	40.00	40.00	40.00	50.00
Relaid	122 " ...	5.00	5.00	10.00	5.00	3.00	20.00	8.00	10.00
Frogs and switches	5 each...	30.00	50 00	150.00	40.00	35.00	15.00	83.60	50.00
Iron straps, stirrups, &c..	57,000 lbs.....	.05	.05	.06	.04	.03½	.05	.06	.05
Ship spikes	6,500 " ...	.05	.04	.06	.04	.03½	.05	.04	.05
Rock removed, channel..	4,000 tons....	2.50	6.00	4.00	5.00	10.00	20.00	3.00	5 00
Total		$511,945	$606,796	$614,610	$629,246	$672,792	$674,688	$686,990	$847,569

SEWERS.—Rockford, Ill.—Edwin Main, Cy. Engr., informs us that the following bids were received Oct. 25, 1898, for constructing sewers; Hardin & Nelson put in extra bid for Y's of 30 cts. for 9-in., 50 cts. for 12-in., and 75 cts. for 15-in.; other bidders did not charge extra for Y's; the contract was awarded Thomas Tole; all bidders from Rockford, Ill., except Hardin & Nelson, of Racine, Wis.:

Quantities.		Thomas Tole.	G. Maffiol'.	Hardin & Nelson.
Pipe 9-in.	2,750 lin. ft..	$0.38	$0 55	$0.75
Pipe 12-in.	1,200 " "	.59	.75	1.00
Pipe 15-in.	1,200 " "	.69	.80	1.50
Manholes: Ordinary..	2 each...	29.00	21.00	30.00
Combined	6 " ...	59.00	30.00	45.00
Lampholes	6 " ...	10.00	3.00	9.00
Intakes	14 " ...	16.00	15.00	15.00
Flushtank	1.....	84.00	21.00	80.00
Total		$3,341	$3,844	$5,542

ELECTRIC CONDUITS.—Erie, Pa.—T. Hanlon, Cy. Clk., informs us that the following bids were received Oct. 27, 1898, for constructing electric conduits:

Items.	George B. Kelley, Corry, Pa.	Kraft & Walther, Erie, Pa.
Conduits: 6-duct, a ft.	$0.09	$0.077
8-duct, a ft.	.07½	.077
16-duct, "	.07½	.077
30-duct, "	.07	.077
Class B manholes, each	23.00	26.50
Service boxes, each	5.00	5.00
3-in. wrought iron pipe, a ft.	.25	.25

PIPE SEWER.—Monticello, Ind.—We are informed that the following bids were received Oct. 28, 1898, for constructing 1, 628 ft. of 30-in. pipe sewer; average cut, 12 ft., in loam, quicksand, yellow and blue clay; Wm. P. Bushnell, Engr.; W. M. Hamlin, Clk. Bd. Trustees; M. Woltz, Pres.:

Items.	*Greenville (O.) Constn Co.	W. W. Hatch & Son, Goshen, Ind.	Smith & Madiem, Goshen, Ind.	W. S. Fries, Greenfield, Ind.
30-in. pipe, 2¼ ins. thick	$2.25	$2.25	$2.45	$2.22
30-in. pipe, 2½ ins. thick	2.65	2.65	2.25	2 32
9-in. pipe for catchbasins	.20	1.04	.45	.32
6-in. Y's in 30-in. pipe	1.00	.75	1.75	1.50
Manholes 8 each	30.00	37.30	34.50	34.00
Catchbasins 9 "	20.00	12.00	25.50	24.00
9-in. traps, each	.....	1.25	1.50	.....
Total	$4,169	$4,561	$4,675	$4,237

*Awarded contract, with pipe 2¼ ins. thick.

WIRE AND INSULATORS.—Washington, D C.—The chief of the signal office, U. S. A., received the following bids Oct. 21 for furnishing wire and insulators:

Bids Received at Washington, D. C., Oct. 21, 1898, for Wire and Insulators.

Bidder.	50 miles of standard wire.—Seven-ply.	50 miles of standard wire.—Insulated and braided.	Galvanized iron wire.—No. 9, 350 miles.	Galvanized iron wire.—No. 14, 300 miles.	Double petticoated porcelain insulators, 3,000
Washburn & Moen Mfg. Co., Worcester, Mass.	$20.68*	$106.00*	$0.04¼	.....	$0.04⅛ †
Okonite Co. (Ltd.), New York	.....	125.00§	.....	.....	.....
J. A. Roebling's Sons Co., New York‡	11.00	.....	4.14	$4.75	.....
Foote, Pearson & Co., 82 Fulton St., New York.	.....	.....	.....	.....	75.00‖
Elmer P. Morris, 15 Cortlandt St., New York.	11.00	66.50	4.14	4.75	82.50
Trenton Iron Co., Trenton, N. J.	.....	1.	3.40[1]	4.35[1]	.....
Western Electric Co., Chicago, Ill.	11.00[2]	1.17[2]	13.12[3]	4.50[3]	71.00[4]
Jas. B. Barron & Co., Hudson St., New York	11.50[5]	175.00[6]	4.25[5]	.04¾[5]	.07⅛[7]
Safety Insulated Wire & Cable Co., New York	10.00	59.50	.....	.....	.....
Barber & Ross, Washington, D. C.	.....	115.00[8]	13.50[9]	4.72[10]	7.90[11]

*F. o. b. at Worcester; or, $108 at Washington; price per mile. †F. o. b. at Worcester. §F. o. b. at Passaic, N. J.; or, $197 at Washington; price, per mile. ‡Per 100 lbs. ‖Per M. at Washington. ¶All prices f. o. b. at factory. [1]A 100 lbs. f. o. b. at Trenton. [2]At Washington. [3]At Trenton, N. J. [4]F. o. b. at East Liverpool, O., or $75 at Washington. [5]At Trenton or Washington. [6]A mile at New York, or $176.50 a mile at Washington. [7]Each, at New York, or 8 cts. each at Washington. [8]At Worcester, or $117 at Washington. [9]At Washington, or $12.76 at Worcester. [10]At Washington, or $3.95 at Worcester. [11]A 100 at Washington, or $7.65 at Worcester.

CAST-IRON WATER PIPE.—Boston, Mass.—The Warren Foundry & Machine Co., 160 Broadway, New York, submitted the only bid to the pauper institutions department, Oct. 17, 1898, for furnishing 127 tons of 2,000 lbs. of cast-iron water pipe, at $17.20 a ton for straight pipe.

ELECTRIC LIGHTING.—Attica, N. Y.—It is stated that the board of trustees has closed a contract with the Maplewood Electric Light & Power Co. to furnish 26 arc lights of 2,000 c. p. each, and 35 incandescent lights of 25 c. p. each, at $10.65. The Attica Natural Gas Co. offered to furnish the lights asked for at $2 for each lamp a year and to keep the lamps lighted every night, moon or no moon.

HIRE OF DREDGE.—Mobile, Ala.—We are informed that the National Dredging Co., Wilmington, Del., submitted the following bid Oct. 13, 1898, for the hire of a dredging plant: A day, $260; number of yards to be removed a day above station 24, 300 to 1,200; below station 24, 2,875 yds.

Bids Received at Erving, Mass., Oct. 27, 1898, for Building a Macadam Road in Erving.

Quantities.		Myron A. Fisk, Huntington, Mass.	J. J. Welch & Co., Salem, Mass.	Tuttle & Edgerly, Swampscott.	James D. Shea, Natick, Mass. (accepted).	Andrew Carberry, E. Walpole, Mass.	H. A. Stewart, Boston, Mass.	Fred E. Ellis, Melrose, Mass.	W. R. Brown, Lowell, Mass.	Coleman Bros., Charlestown, Mass.
Excavation	4,912 cu. yds.	$0.30	$0.24	$0.23	$0.245	$0 36	$0.35	$0.24	$0.31	$0.30
Ledge excavation	80 " "	2.00	2.00	1.50	1.10	1.75	2.00	2.00	1 15	2.00
Rubble masonry, laid dry	140 " "	3 00	4.50	5.00	2.50	3.50	5.50	3.50	1 50	4 00
Rubble masonry laid in cement	14 " "	7.00	7.00	6.50	5.00	8.00	9 00	3.75	8.00	8.00
Gravel	1,930 " "	1.00	.80	1.20	.40	.80	.75	.68	1.10	.90
Telford	100 sq. yds.	.33	.30	.30	.25	.50	.45	.25	1.25	.80
12-in. vitrified clay pipe	30 lin. ft..	.60	.60	.60	.50	.60	.65	.50	.45	.45
Fencing used as guard rail	1,950 " "	.15	.15	.18	.145	.15	.20	.14	.25	.12
Side drains	825 " "	.33	.30	.35	.26	.35	.35	.30	.20	.40
24-in. vitrified clay pipe	80 " "	.90	2.00	3.00	1.45	2.00	1.15	3 00	1.00	1.30
Stone monuments	26 each...	1.00	1.50	1.50	1.50	1.50	1.50	1.50	1.00	2 00
Catchbasins	1.....	20.00	18.00	30.00	15.00	25.00	30.00	20 00	18.00	15.00
Total		$4,815	$4,416	$5,361	$3,288	$4,883	$5,111	$3 938	$4,909	$4,801

ELECTRIC LIGHTING.—Salina, Kan.—A five-year contract is said to have been let for electric lighting to the People's Light, Heat & Power Co., as follows: 34 2,000-c. p. arc lights, 1 50-c. p. incandescent, 1 16-c. p. incandescent and 17 lights now used in the city hall and hose house of 16 c. p. each, at $3,100 a year, payable monthly. This lighting to be furnished upon the moonlight schedule of 2,000 hours a year. Excess hours to be paid for at the rate of $3,100 for 34 lights, and if the number of hours under the moonlight schedule does not equal 2,000 hours, the corresponding reduction to be made in price. Any additional arc light to be furnished upon the same terms and conditions at $75 a light.

INDUSTRIAL NOTES.

RUSSELL & CO., Massillon, O., are contemplating building a special traction engine for hauling freight.

THE MISSOURI CAR & FOUNDRY CO., St. Louis, Mo., has an order from the Baltimore & Ohio R. R. for 2,000 freight cars, according to report.

THE JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J., has added an extension to its pencil factory, 40 by 100 ft., three stories high, driven by electric power from a dynamo placed in the main factory. The company will also sink an artesian well for a supply of water for factory use, and some time next year various other additions will be built to the plant. The company was established in 1827, but no year has equaled the present for volume of business.

THE KENNEY CO., 72 and 74 Trinity Place, New York, reports that the U. S. government inspectors have decided to equip the transport "Massachusetts," now being overhauled at the John N. Robbins Co. Ship Yard, Erie Basin, Brooklyn, N. Y., with the Kenney flushometer system. In addition 60 Kenney flushometers were recently installed on the transport "Mohawk." The company also informs us that the Bourne Bldg., now being erected on Liberty St., New York, by the Singer Mfg. Co., will be equipped with the Kenney flushometer system.

THE SAN FRANCISCO BRIDGE CO., San Francisco, Cal., has excavated 1,600,000 cu. yds. of material from Mare Island Strait, under its contract, on which work was begun September, 1897. There remains 200,000 yds. to excavate, which will give a channel 28 ft. deep at mean low water and varying in width from 250 to 600 ft., from the Navy Yard to deep water in San Pablo Bay. Two hydraulic suction dredges have been employed on the work and the material has been deposited in basins on Mare Island. The greatest distance of material pumped has been 3,500 ft. The company also has a contract from Mr. R. D. Chandler to build coal bunkers on pier 15, Green St., San Francisco, at a cost of $23,688.

THE BROWN HOISTING & CONVEYING MACHINE CO., Cleveland, O., and 26 Cordlandt St., New York, has prepared plans for the New London (Conn.) coaling station for the U. S. Navy, and the contracts for the work have just been awarded by the Bureau of Yards and Docks, U. S. Navy, to J. W. Hoffman & Co., Philadelphia. The former company will furnish and erect two of its extra heavy bridge tramways, the same as those now being supplied to the U. S. Navy at Key West and Dry Tortugas, Florida. These bridges are 180-ft. span, with 92-ft. cantilever extensions and 36-ft. projections over the front of dock. J. W. Hoffman & Co. will build the necessary piers and buildings to accommodate this machinery. This is the fifth coaling station awarded so far by the Navy Department, the coal handling machinery of which is being furnished by the Brown Hoisting & Conveying Machine Co.

C. O. LUCAS & CO., Greenville, O., report that they are now making a specialty of small water-works plants. They have recently received the contract to put in the machinery for the water-works at Trotwood, O., consisting of pump, gasoline engine and tank. The pump is built so as to deliver both water and air at the same time to a tank of 5,000 gallons' capacity under a pressure of about 80 lbs. The air going to the top of the tank forms a cushion and being under pressure forces the water through the mains. This forms a ready and efficient service and does not require a stand-pipe or elevated tank, and in case of fire the compressed air doing the work until the gas engine is started to keep up the supply. The cost is claimed to be less than where an elevated tank or a stand-pipe is used and at the same time such a plant is always ready for use.

THE WESTINGHOUSE AIR-BRAKE CO. authorizes the following statement in regard to the New York and Boyden companies: "The purchase by the Westinghouse Air-Brake Co. of the patents and business of the Boyden Brake Co. is the final conclusion of a long and interesting litigation relating to air-brakes. The course of these suits has been followed with interest by railway men, because to a considerable extent they involved the right of the Westinghouse people to the sole manufacture of what is known as the 'Quick Action' brake. By the purchase of the Boyden inventions, which the Supreme Court said were highly meritorious, the Westinghouse Co. still claims to control the situation, although this is contested in the U. S. Courts by the New York Air-Brake Co. The Westinghouse Co. has been successful in compelling the New York Co. to cease making three different forms of brakes, and it claims that a fourth one now being put on the market is also an infringement of its patents. This question will be finally determined by the Court of Appeals, probably in November or December, the opinion of the lower court having been favorable to the New York Co. Should the decision be favorable to Westinghouse, then the New York Co. will once more be enjoined, and prevented from making its present style of brake. In addition to this particular suit, it appears that the Westinghouse people have brought three other suits against the New York Co., and it would therefore look as if litigation between these two concerns was to be, if anything, more protracted than that between the Boyden and Westinghouse companies."

Contract Work Should Always be Advertised in a Paper Read by Contractors.

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